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**From:** Story, Karen [Story.Karen@epa.gov]  
**Sent:** 11/23/2018 2:21:09 PM  
**Subject:** News Clips

## REGION 2 NEWS

[South Glens Falls water tower woes over at last](#) (GLEN FALLS POST-STAR; November 21, 2018)

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[Lake George septic, sewer projects advancing](#) (GLEN FALLS POST-STAR; November 21, 2018)

The town of Lake George is busy with wastewater projects, including work on upgrades to sewer lines in the Caldwell Sewer District and on its survey of septic systems.

[Hunters: Remain vigilant of diseases like CWD](#) (POUGHKEEPSIE JOURNAL; November 21, 2018)

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[2 towns agree to switch to dual-stream recycling](#) (NEWSDAY; November 20, 2018)

The Brookhaven and Smithtown boards voted at separate meetings Tuesday to ratify a deal to jointly collect and process paper, cardboard and other recyclable material for at least six months.

[NYCHA gas problems are ruining Thanksgiving for residents](#) (NEW YORK POST; November 20, 2018)

Crappy Thanksgiving, NYCHA residents!

[Drinking water: 1.5M in NJ served by utilities that failed tests since Flint](#) (ASBURY PARK PRESS; November 20, 2018)

Newark isn't the only place in New Jersey where the purity and safety of drinking water has been called into question.

[On Thanksgiving, a man v. nature fight for cranberry jelly](#) (NORTH JERSEY RECORD; November 20, 2018)

Cranberries are lazy, persnickety and wild.

[Officials say no raw sewage leaked into Huntington Harbor from broken pipe](#) (NEWSDAY; November 20, 2018)

The Suffolk County Department of Health Services issued a precautionary health advisory on Monday for Huntington Harbor after a broken pipe was found during the weekend inside a tank at the Huntington Sewage Treatment Plant on Creek Road.

[Governor Announces Improvements in Rail Infrastructure Statewide](#) (SUSTAINABLE CITY NETWORK; November 19, 2018)

Governor Andrew Cuomo announced \$27.1 million to fund rail and port improvement projects across New York State.

## PUERTO RICO / VIRGIN ISLANDS

They approve research on Punta Cucharas Natural Reserve in Ponce (LA PERLA DEL SUR – Google Translate English; November 19, 2018)

"It is important to carry out this investigation because of the serious damage to the reserve that causes this type of activity and that even adversely impacts tourism in the region.

AAA plants from Naranjito and Corozal continue to plan improvements after María (METRO.PR – Google Translate English; November 19, 2018)

The executive president of the Aqueduct and Sewer Authority (AAA), Elí Díaz Atienza, detailed on Monday the works that have been carried out during the past months in the pump plants of the municipalities of Naranjito and Corozal, which have not yet recovered after the effects of Hurricane Maria.

Gaps in Prepa Vacuum Exposed (CARIBBEAN BUSINESS; November 19, 2018)

While there is consensus that the Puerto Rico Electric Power Authority (Prepa) needs improvement, the bet that privatization will end the utility's monopoly and bring lower prices and better conditions is not a sure one, argued one of the island's top urban planners.

Legisla so that you can take advantage of the debris of hurricanes (PRIMERA HORA – Google Translate English; November 18, 2018)

The representative for the District 19 of Mayagüez and San Germán, Maricarmen Mas Rodríguez, announced through a press release the filing of a measure that seeks to order the Executive Director of the Puerto Rico Solid Waste Authority (ADS) to create an effective recycling program to convert the debris of vegetative material collected after the onslaught of Hurricanes Irma and María on compost or some of its derivatives.

Rosselló will continue to allow construction in flood areas (NOTICEL – Google Translate English; November 16, 2018)

Governor Ricardo Rosselló Nevares announced the adoption of the Puerto Rico Codes of 2018, to update standards and minimum construction requirements but, contradictorily, said that it will continue to be allowed to be constructed in flood areas.

## NATIONAL

### Air Quality

Inside EPA: Local Governments Push EPA Air Law Exemption For 'Prescribed Burning'

Mother Jones: Northern California's Homeless Can't Escape Wildfire Smoke

San Francisco Chronicle: Pre-winter storm helps clear Bay Area air, more rain expected

### Climate Change

E&E News: 'It's not a happy place'

### Drinking Water

CBS News: Lead in America's water systems is a national problem

Chemical & Engineering News: Treatment for lead in drinking water is evolving. Will the U.S. EPA catch up?

North Carolina Health News: New Data Could Change Health Goal for River Contaminant

Philadelphia Inquirer: Health officials prepare findings from blood tests of Bucks, Montco residents with contaminated water

## **Enforcement**

Inside EPA: EPA Officials Wrestle With Enforcement Decline Spurred By Trump Policies

## **Pesticides**

Arkansas Democrat-Gazette: EPA scientists' dicamba input went unheeded

## **Superfund**

E&E News: For them, a coal plant bribery scandal is personal

## **FULL ARTICLES**

### **REGION 2 NEWS**

#### **GLENS FALLS POST-STAR**

South Glens Falls water tower woes over at last

By Kathleen Moore

November 21, 2018



The South Glens Falls village water tower is finally getting repainted.

The village won a state grant last week that will cover the entire cost.

The lead-based paint on the 1970s-era tower has been an albatross around the Village Board's neck. The tank badly needs repainting or the metal skin will get damaged by the weather. A leaking water tower would be a disaster.

But repainting requires removing or covering the peeling paint, at an extraordinary cost because it is lead-based. To remove it, which must be done some day, workers would have to weld brackets to the top of the tank and hang an adjustable drape around the entire tank to catch all of the lead dust and lead paint chips as they scrape them off. Workers would remove all paint, down to the metal, and then prime and repaint the tank.

The most recent estimate for that work was \$1.7 million for a paint job that might last 20 years.

MOREAU — When town Supervisor Todd Kusnierz said Tuesday that big news about the sewer project could come “any day now,” he didn't think the d...

The Village Board could hire workers to paint over the lead-based paint, at about \$500,000, according to the most recent estimate. Board members have been reluctant to take that course because it only delays the eventual job by 5 to 10 years, while still costing a great deal of money.

By comparison, when Moreau powerwashed and repainted one of its towers this year, it cost \$82,800. That tank is one-third the size of the village tank, so it is fair to assume that if the village tank were lead-free, the repainting job would cost about \$250,000.

Until now, the board didn't have the money for the lead paint-removal job.

Engineers told the board that no one gets a grant to repaint a water tower, because it's considered regular maintenance. Previous attempts for grants failed.

But Mayor Harry Gutheil said when he was campaigning that he would focus on grant-writing. He emphasized his experience in getting grants as town supervisor.

And now he has done it.

The village was awarded a \$1.62 million state grant last week for a \$2.7 million project that would include removing the lead paint and repainting the water tank. It might also include carbon filtration at the water plant in response to a PFOA/PFOS concern. Water tests this year found trace amounts of those chemicals.

He was very pleased to win the grant.

“That was one of my main goals and objectives,” he said.

The tank was built between 1974 and 1976, according to village records.

The village also won a \$500,000 state grant for a \$2 million sewer project. Gutheil is hoping to also get a Water Quality Improvement Grant from the state Department of Environmental Conservation for the project. It would allow the village to send a robot camera through the lines, looking for places where water is infiltrating the pipes. Then the village would line the pipes from the inside, to reduce infiltration. If the village gets the other grant, Gutheil hopes to also build sewage storage near the village pump station.

In times of high flow, during storms in which rain water gets into the sewer system, the village could hold its sewage and not send it to Glens Falls immediately.

Glens Falls has had to release raw sewage into the Hudson River repeatedly, because the sewage plant gets overwhelmed during rainstorms.

Storing the sewage to send it more slowly is an unusual solution, but it could be possible if the village gets a second grant for the \$2 million project.

“When you get \$2 million in grants, it gives you the opportunity to do a lot of work,” Gutheil said.

GLENS FALLS POST-STAR

### Lake George septic, sewer projects advancing

By Michael Goot

November 21, 2018

The town of Lake George is busy with wastewater projects, including work on upgrades to sewer lines in the Caldwell Sewer District and on its survey of septic systems.

The Town Board on Monday approved awarding a bid to Kenyon Pipeline Inc. to use cameras to inspect about 2,000 linear feet of 8-inch sewer pipes and install slip lines where needed to stop infiltration of groundwater, said Dan Barusch, director of planning and zoning.

This town received a state Department of Environmental Conservation water quality grant for \$120,000. The grant requires an 80 percent local match for a total of \$200,000, according to Barusch. He said the bid for the work came in lower than expected at about \$185,000.

“We’re going to try and get some additional stuff covered with that leftover (money),” he said.

The town is taking out a \$200,000 bond to pay for the work and will get reimbursed from the state. The board set a public hearing for Dec. 10 at 6:15 p.m. at Town Hall.

This new project follows a \$343,000 project to upgrade the sewer conveyance system in the Caldwell Sewer District and repair the 8-inch sanitary sewer in front of Fort George Road. KPI is also doing that project, which is funded by a state grant and should be completed around Christmas, according to Barusch.

Barusch said the nearly three-year project to map failing septic systems should be completed in January. The town has been working with the Fund for Lake George to create a color-coded map based on data about water quality in the area, age of the septic system and whether it has been inspected. That information is being put together into a map to find problem areas, which the town can prioritize.

The survey map was funded with a \$104,000 DEC grant, and the state is looking to use it as a model, according to Barusch.

He plans to present the findings to the board in December.

POUGHKEEPSIE JOURNAL

## Hunters: Remain vigilant of diseases like CWD

By Bill Conners

November 21, 2018

When I reminded hunters a couple of weeks ago to be careful when handling wild game — especially whitetail deer — it was prompted by news that bovine tuberculosis had been found in deer in the midwest.

It was only about a week later that I received news that biologists at New York's Department of Environmental Conservation may have detected a new case of chronic wasting disease in Chautauqua County. The discovery was made during routine surveillance testing of a hunter-shot deer. But good news quickly followed bad, the original test was ultimately determined to be the result of a "false positive."

Chronic wasting disease is a fatal brain disease found in certain species of the deer family. Unfortunately, the deer has to be dead to be tested because slices are needed from the deer's brain.

To be clear, bovine tuberculosis has not been discovered in New York. That does not mean we should drop our guard. Diseases found in wildlife populations always seem to find a way to migrate, either by human carelessness or via natural migration and exposure.

Such was the case with the 2005 discovery of CWD in Oneida County. Lack of due diligence on the part of a wildlife rehabilitator/taxidermist in upstate Oneida County ended up exposing whitetails to the disease. He had handled a deer from the west or midwest. By the time the danger was over, seven deer were found with CWD in the area of his facility.

DEC has been monitoring for CWD since 2002 here in New York. Monitoring intensified following the limited outbreak in 2005 when seven deer in Oneida County, including five captive deer, were found with CWD. Along with the monitoring, the department also took immediate action to contain the disease. DEC and the Department of Agriculture and Markets depopulated the affected captive herds and culled several hundred wild deer in the area.

Since then, DEC has tested more than 46,800 deer. There have been no additional cases detected.

Protecting New York's \$1.5 billion white-tailed deer hunting industry is of paramount importance. New York is still the only state to have eliminated CWD once it was found in wild populations.

The state comptroller recently reported that the state's farmers generate \$4.8 billion for our economy. Sporting activities generate, according to the comptroller, more than \$5 billion. A major outbreak of any disease in our deer herd would do enormous damage to our hunting industry.

New York's more than 575,000 hunters harvest an average of 210,000 deer each year. The white-tailed deer population is estimated to be from 900,000 to 1 million.

The Centers for Disease Control reports that there are 226 counties in 23 states where CWD has been reported. Three Canadian provinces also have confirmed cases.

Because CWD was not confirmed in Chautauqua DEC will not establish a containment area but biologists will continue strategic surveillance.

Hunters can protect New York's deer herd from CWD by following these tips provided by the DEC:

► If hunting any type of deer, elk, moose or caribou outside of New York, hunters should debone harvested animals before bringing harvest back to the state, and follow the law about importing carcass parts from outside of New York. DEC will confiscate and destroy illegally imported carcasses and parts, including antlers. Intact deer carcasses cannot be brought into New York from Pennsylvania or Ohio, which are both CWD-positive states.

► Dispose of carcass waste in a landfill, not just out on the landscape.

► Report any deer that appears sick or acting abnormally by contacting your local DEC wildlife office or environmental conservation officer. Call the wildlife line in New Paltz office at 845-256-3092 or a conservation officer at 845-256-3013, if you suspect you've seen a sick deer.

► Use alternatives to urine-based lures or use synthetic forms of deer urine. Scientists have found a building body of evidence that grass plants can bind, uptake and transport infectious prions. The prions infect the deer when they eat the plants.

## NEWSDAY

### 2 towns agree to switch to dual-stream recycling

The agreement requires residents to sort paper from plastic, and glass will no longer be picked up at the curb.

By Newsday Staff

November 20, 2018



The Brookhaven and Smithtown boards voted at separate meetings Tuesday to ratify a deal to jointly collect and process paper, cardboard and other recyclable material for at least six months.

Last week the towns and Southold agreed in principle that each would switch to dual-stream recycling programs, requiring residents to sort paper, plastics, aluminum and other metals separately.

Southold Town board members did not schedule a vote on the agreement Tuesday night because they wanted to review the proposal, officials said.

As part of the plan, the material will be stored at Smithtown's resource facility on Old Northport Road and processed by private hauling companies. Glass will no longer be collected by each town's curbside recycling programs.

Brookhaven plans to start its dual-stream program on Nov. 28. Smithtown and Southold said their new programs would start in January. The deal also includes the villages of Asharoken and Lloyd Harbor, both in Huntington Town.

"The recycling market has become very, very difficult," Brookhaven Supervisor Edward P. Romaine said in an interview Tuesday. "Recycling is changing. There was a time when it was easy. It's not easy anymore."

The three towns previously had employed single-stream programs, in which residents collected all recyclables in one bin. They had to scuttle those programs in recent weeks after Green Stream Recycling backed out of a 25-year deal to run Brookhaven's single-stream recycling plant.

Green Stream officials said the Brookhaven plant no longer was financially viable because of collapsing prices in international recycling markets.

"For the time being, it's a stopgap measure," Southold Supervisor Scott Russell said of the deal. "Single stream is very popular. It made recycling easier and increased our recycling rates, but the reality is, things have changed."

The Smithtown Town Board voted 5-0 to approve the pact. The Brookhaven Town Board voted 7-0 in favor of the measure Tuesday night. Southold Town Councilman and Deputy Supervisor William Ruland said the agreement would likely be placed on the agenda for discussion when the board meets for its next scheduled work session Dec. 4.

"This came in the nick of time," said Russell Barnett, Smithtown's top solid waste official, following the vote. "If we did not do this deal today, those recyclables that are going to get picked up tomorrow would have been spilling out of the facility."

The Lloyd Harbor Village Board voted unanimously Monday night to ratify the deal. Asharoken Village Clerk Nancy Rittenhouse said officials there will vote on the deal at a later date.

Smithtown has selected West Babylon-based Winters Bros. Waste Systems, which will pay \$30 a ton for mixed paper and cardboard, and Trinity Transportation Corp., which will be paid \$68 per ton for metal and plastic minus glass.

Brookhaven will pay Smithtown \$5 per ton of mixed paper to cover handling costs. The contract can be extended for an additional six months if all parties agree. Southold would pay Smithtown the same fee-per-ton if they eventually approve the measure.

Brookhaven plans to establish glass collection centers at Town Hall and four other locations, including Manorville, Holtsville, Mount Sinai and the town landfill in Brookhaven hamlet. Glass will be ground into sand and used as landfill lining.

In Southold, residents choose between having recyclables picked up at curbside by private carters or bringing the material to the town's solid waste facility in Cutchogue. Russell said the facility will be modified to allow residents to deposit paper and cardboard separate from plastics and metals.

NEW YORK POST

[NYCHA gas problems are ruining Thanksgiving for residents](#)

By Georgett Roberts, Nolan Hicks and Ruth Brown

November 20, 2018





### Crappy Thanksgiving, NYCHA residents!

Families in the Bronx's Marble Hill Houses were forced to cancel their holiday feasts for Thursday because the gas in their apartments has been off for months — and they were given measly hot plates for cooking.

"I have been here for 28 years and I cook every year. This is the first year I am not cooking," tenant Altagracia Vicenta, 58, told The Post.

"I feel so sad. I love to cook for Thanksgiving. I look forward to it. [But now] I tell everybody not to come."

Vicenta's is one of 55 households at the complex without gas as of Tuesday, according to NYCHA — although the agency claims 14 of those units will be fixed on Wednesday.

She is disabled — requiring two knee replacements and a hip replacement — so she won't be going anywhere in the frigid weather for a festive feast.

The best Vicenta can hope for is that her husband, Celestino, 74, will go downstairs to buy them sandwiches to eat after watching the parade on TV.

Affected residents say the gas was turned off three months ago and they've been without functioning ovens and stoves since.

In the meantime, each unit has been given a lone hot plate, but the gadgets are hardly capable of cooking a turkey.

"It's an insult," said Luis Parra, 29, an Uber driver who usually hosts Thanksgiving but this year will have to take his kids, including a baby son, to celebrate at a relative's home.

"What can this do for a family of four? It's like your car breaks down and they say here is a skateboard. They have no respect for us."

Eddie Rodriguez, 24, said that during the outage, he has been spending at least \$200 a week to get healthy food for his wife, sister-in-law and newborn daughter.

"Everybody works so we don't have time for one little hot plate. I had to go out and buy another one," said Rodriguez, a FedEx driver. "I've been spending more on food than I want to. It has thrown my budget off."

A NYCHA spokeswoman said residents without stoves can get a free Turkey Day meal from the agency if they request one, but many told The Post that was news to them.

Rosa Abreu, 44, said she got a recorded call from the agency Saturday saying to call back if she needed food — but she'd rather go to her sister's home.

"It puts a damper on my holidays. Normally, we stay here," said Abreu, who works for a catering company and lives with her daughter, son and granddaughter.

She said NYCHA came to work on her pipes Monday and told her the gas would be back on before Thanksgiving — but she's not holding her breath because Con Ed will need to inspect them first.

Some apartments have been told an adult had to be home Wednesday for the repairs — or the lock would be drilled off to gain access.

NYCHA blamed the months-long repair time on a process that requires cooperation from the Department of Environmental Protection, Department of Buildings and Con Ed.

"We understand a gas outage is incredibly frustrating, especially around the holidays," the agency said.

Ironically, the problem was discovered as NYCHA was replacing stoves in the buildings, according to Assemblyman Jeffrey Dinowitz (D-Bronx) — who blasted the troubled agency Tuesday for taking so long to fix the issue.

"Sometimes, repairing gas lines takes a while, but three months is just outrageous," he said.

"If this were a wealthy building somewhere in the city, this would never happen."

ASBURY PARK PRESS

### Drinking water: 1.5M in NJ served by utilities that failed tests since Flint

By Russ Zimmer and Andrew Ford

November 20, 2018



Newark isn't the only place in New Jersey where the purity and safety of drinking water has been called into question.

More than 1.5 million New Jerseyans are served by a utility that has been cited for excessive contaminants since April 2014, when the Flint water crisis was revealed, according to an analysis of U.S. EPA data by USA TODAY NETWORK New Jersey.

The data shows that water utilities in the Garden State have racked up at least 226 contamination violations of the Safe Drinking Water Act since Flint became synonymous with tainted tap water and put other water systems under a spotlight.

The state's largest city, Newark, acknowledged last month that the treatment program it was deploying to stop lead from leaching into drinking water in the city was "no longer effective," according to NJ.com.

But the health-based violations elsewhere in the state mostly swirl around excessive levels of bacteria or, ironically, inordinate amounts of disinfectants meant to cleanse the water of biological contaminants.

"Most of the violations that you see are coliform testing and disinfection byproducts," said Anthony Matarazzo, director of water quality for New Jersey American Water, the state's largest private provider. "Therein lies the challenge for utilities. We have to balance the microbiology of the water with the chemical contamination that may occur as a result of applying a disinfection product."

Some violations do involve substances, including radioactive pollution and drycleaning chemicals, that can have lasting effects, especially for children.

Explore the map below to see which water utilities were cited for delivering tainted water.

For example, the Verona Water Department was cited for unacceptable levels of arsenic, a naturally occurring element that attacks nearly every system in the human body, in March 2015. Three months later the system was considered "compliant" again with the arsenic rule.

The list of violators includes some of the biggest municipal water purveyors in the state, such as Newark, Jersey City and Trenton, but also encompasses smaller communities, like Bloomfield, Lacey and Wall.

Some of the worst offenders are the smallest operators. Buttonwood Mobile Home Park, a campground with 55 water service hookups in the Pinelands, has 24 violations since 2014 — all for having too much of a particular type of radionuclide, one that is linked to bone, liver or breast cancers.

The Safe Drinking Water Act is a federal law passed in 1974 that sets standards on drinking water supplies in America.

The SDWA contains enforceable limits on impurities like lead or hexavalent chromium (also known as Chromium 6) as well as rules that dictate water-testing procedures and schedules.

EPA data shows there have been nearly 34,000 contamination violations of the SDWA — impacting the water delivered to 1 in 8 Americans — across the country since April 2014, when the city of Flint started drawing water from the Flint River. That decision triggered the beginning of a public health disaster that shocked Americans who couldn't believe that a problem of lower-developed countries — unsafe public drinking water — could happen here.

Threats to drinking water, however, extend beyond lead. Nowhere is that more apparent than in New Jersey, where a toxic legacy of industrial waste sometimes infects groundwater supplies.

"The concerns that people have are reflective of the bigger issue which is how we regulate industrial chemicals in this country," said David Andrews, a senior scientist at the Environmental Working Group. "We think much more could be done to protect drinking water sources."

Matarazzo said part of the issue is perception.

Our understanding of science has evolved to where new contaminants are regularly discovered as well as a heightened ability to detect ever smaller amounts of age-old impurities, he said.

"The technology has moved along that we can see a broader spectrum of contaminants and at much lower levels," Matarazzo said. "We start to see things that we haven't seen before and in levels that we hadn't previously considered public health risks."

One type of contaminant not included in the drinking water violations are PFOAs, which are known to be pervasive in New Jersey's water supply, as you can see in the video at the top of the page.

But another class of SDWA violations shows the persistence of gaps in testing and record-keeping — rules that are in place to make sure your water is being watched closely.

Another 3,800 major monitoring violations of the SDWA were rolled up in New Jersey since Flint, meaning that these utilities were failing to properly test for dangerous manmade and naturally occurring chemicals or to document those procedures.

See how many major violations your water supplier has racked up since April 2014, when the water crisis in Flint was revealed, in the interactive map below.

The treatment industry requires a constant flow of capital to replace old pipes — lead service lines, especially — or to implement new technology, such as granular activated carbon, or GAC, filtration systems, to confront the next set of challenges.

Think of a utility's treatment plant and vast network of pipes like a used car, said Steve Via, a federal lobbyist for the American Water Works Association, the largest trade association for water supply professionals.

"(Water infrastructure) needs to be renewed and replaced. Your car is not going to last you forever and neither is your water system," he said. "If you don't do that not only are you going to fall off meeting your current goals but you'll be less able to meet new challenges when you do identify them."

## NORTH JERSEY RECORD

### On Thanksgiving, a man v. nature fight for cranberry jelly

To make your side dish, this farmer In the New Jersey Pine Barrens makes rivers run sideways

By Christopher Maag

November 20, 2018

Cranberries are lazy, persnickety and wild.

Also, cranberries dislike you. There's a reason why a raw cranberry taste like a cherry dunked in napalm: rare among plants, the cranberry is simultaneously edible and repulsive.

Cranberry jelly may be a staple Thanksgiving snack. But raw cranberries are so tart, most humans can't stomach more than three in a row.

"What's most surprising about cranberries is that we're eating a fruit that evolved not to be eaten," said Nicholi Vorsa, director of the Marucci Blueberry and Cranberry Research and Extension Center at Rutgers University. "There's no reason why we should eat this fruit that tastes godawful!"

The distaste is mutual. The last thing a cranberry plant wants to do is produce maroon-colored jelly shaped like the ribbed insides of an aluminum can, to say nothing of newer products like Ocean Spray Cranberry Peach Bellini Mocktails, for people, or Zesty Paws Cranberry Bladder Bites with Cran-Max®, for dogs.

When cranberries get their druthers, in fact, they simply run away. If a farmer plants an apple orchard, Vorsa said, she can come back 50 years later and find the same apple tree standing in the same spot.

“A cranberry bog might be gone in 50 years. It might have moved 50 yards down the road,” Vorsa said. “There are no other crops that are as difficult to control as cranberries.”

Hell. Cranberries don’t even grow in water. Contrary to the image made famous by Ocean Spray commercials, popular on television this time of year, cranberries grow in conditions akin to deserts.

Also from TV ads, one might imagine cranberry growers to be simpleton goofballs, always horsing around in rubber waders up to their nipples.

This, too, is mistaken.

Bill Haines, Jr. and his family have spent five generations attempting to tame the wild cranberry, and they’ve done a better job than just about anybody. The official name of the Haines farm is Pine Island Cranberry Company, Inc., located near Chatsworth, Burlington County. Some people call the farm Hog Wallow, because it was founded in 1890 at a low spot in the road where wild pigs liked to cool off.

Haines calls it “The Place.” It encompasses 1,440 acres of bogs and nearly 13,000 acres of forest, swamp, reservoirs, canals, dams, big houses, little houses, pumphouses, a sand mine and a private airstrip, carved from the pines and paved in sand.

“You can call me a lot of things, but you can’t call me easygoing or complacent,” said Haines, 65. “This place has been run by unreasonable people for 128 years. And it isn’t about to change.”

Cranberry Farming in New Jersey Tariq Zehawi and Thomas P. Costello, USA Today Network New Jersey

New Jersey's cranberry king

### **A man at the peak of his powers**

His holdings make Haines the largest cranberry producer in New Jersey, and among the largest landowners in the state. The Oswego River and the west branch of the Wading River run through his farm, and Haines controls both almost entirely.

He controls whether his cranberry vines drink or drown. He controls when they lie dormant. He controls how much food they eat. He struggles with all his considerable might to control whether they reproduce, and how, and with whom.

Haines’s power peaks during the fall harvest, when each bog is flooded for about a day. (The practice was popularized in 1961 by his father, Bill Haines Sr.) That’s when workers knock berries from the vines, creating the only picture of a cranberry bog most people ever know, with azure ponds covered in scarlet, bobbing fruit.

Every other day of the year is a struggle between man and nature. On the side of man is Bill Haines, a control freak of the highest rank.

At six feet four inches Haines is a lanky man, squarely built, with blue eyes gone crinkly from squinting in the sun. When things are going well this large man speaks in a voice that is disarming and soft. He crosses and re-crosses his legs, flings his hands around loosely, so comfortable in his power he seems to forget all about it.

“We didn’t have a clue what we were doing,” Haines said of building the first overhead irrigation system in a New Jersey cranberry bog, in 1975. “And every day about 10 o’clock I got hell from my dad for not getting it done.”

When things don’t go well, another side of Haines jumps out. On a sunny day ten years ago, I rode shotgun in his Ford pickup as Haines gave me a tour. Haines was talking amiably about soil when he stopped the truck hard, swung open the door, and charged a group of workers.

“What’s the story of this truck that’s been sitting here for two days?” Haines said, jerking his thumb toward a dump truck stalled by a broken pump. “If they get the pump fixed in November it won’t do me any damn good! We need that truck moving! Now!”

Of course, the primary obstacle in Hog Wallow is neither the trucks nor the help. It is the riotous, recalcitrant cranberry, always finding ways to squirrel free.

### **Let’s get ornery**

#### **Nature’s Peripatetic Floozies**

Cranberries are the Brillo Pads of fruit. High in benzoic acid, they scour the bellies of mammals like steel wool against a saucerpan. Native Americans swallowed the berries to prevent gut infections, and they applied mashed-up cranberry paste to open wounds for the same reason. These tricks were borrowed by early white settlers, who also ate the berries to ward off scurvy.

Scant medical benefits aside, a cranberry’s highest achievement is to be a pain in the butt. Cranberries are peripatetic floozies; they will reproduce with just about anybody. Each berry is heterozygous, which means if a single berry drops to the ground, its seeds might sprout any of a thousand different varieties. Bees also pollinate cranberry flowers, creating additional combinations.

“Cranberries are an ornery bunch,” Susan Playfair wrote in *America’s Founding Fruit*, a book about cranberries. Playfair’s great-grandfather owned a cranberry bog in Massachusetts.

But the cranberry’s favorite way to reproduce is to forget this berry business entirely. It prefers to cover the land with vines, which farmers call “runners.” These runners search for dry, sandy soil with just enough water underneath for their roots to sip.

“Cranberries live on this edge between wet and dry environments,” Vorsa said.

If it finds perfect conditions, a cranberry plant stays put. If not, it keeps running.

“From an evolutionary standpoint, a cranberry has evolved one of the strongest abilities among all plant species” to run away, Vorsa said. “Runners will just go back and forth and colonize the appropriate water level.”

Here lies the heart of Bill Haines’ struggle. He needs fruit. But growing fruit requires hard work, something cranberry vines disdain.

“Sexual reproduction is good for the species, but it’s a stress on the individual plant,” Vorsa said. “So you have what I call rogue cranberry plants that come in and out-muscle the variety you want.”



Cranberries remain strong-willed because humans are new to breaking them. Corn was domesticated in Mexico about 8,700 years ago. Today, most commercial corn varieties die without human oversight.

When a cranberry plant is left to its own devices, meanwhile, it goes kind of nuts. The tart red berries weren’t hemmed into commercial bogs until 1816.

“Cranberries are unique because they’ve been domesticated only within the last couple years,” Vorsa said.

Even today, nearly every cranberry we consume is essentially wild, a genetic individual.

“Cranberries are real finicky,” Haines said.

Only now are farmers beginning to plant new varieties bred by Vorsa and his colleagues at the Rutgers extension center specifically to produce more fruit. One is the Mullica Queen, named for the river that starts just south of Haines’s bogs.

Another is Haines, named for Bill Haines’ dad.

“We’ve got ten-acres of Haines,” Haines said. “We’re pretty proud of that.”

Early Black, an old variety, typically produces 200 barrels of berries per acre, Haines said. New varieties more than double that.

“We plan on getting 300,000 barrels” of cranberries this year, he said. “I think someday we could be producing half a million.”

Every old bog that Haines replants with new varieties will boost his total production.

Eventually, though, he will lose every bog to the old, barren, fast-running invaders.

They come on the wind. They sprout from seeds that drop from vines to the ground. They float from bog to bog in the harvest flood. They hitch rides in the fur of bees.

If Haines manages his farm well, he figures it will take 50 years for the invaders to win.

If he screws up, his berry-producing bogs could be lost to vines in a few seasons.

“A bog can go backwards and revert to the wild if you don’t pay attention,” he said.

On a cloudy day this fall, I climbed into Haines' Ford pickup for another tour. Haines’ mood was bright. Four of his six children and one son-in-law have assumed responsibilities at the farm since my last visit, but Haines remains the ultimate authority.

He is trying to let the young people run things.

“It’s not good for them for me to hover around,” he said. “It can make them nervous.”

Haines is respected, sometimes feared, because no one knows this land like he does. In his youth he worked the farm with his hands, while in his mind he daydreamed of moving water. Haines realized he could open the floodgates at Old Reservoir, letting water from the Oswego River fall south into Old 22 Acre, into Shanty and Big Meadow and Portugee. From those bogs he could shunt the river east through a bog called Dollar and a Half.

"My dad’s manager didn't like the bog, and said he wouldn't give a dollar and a half for it," Haines said. "We have another one called Thousand Dollar. Apparently he liked that."

From Dollar and a Half, Haines can switch on his pumps and lift the water uphill to Jonathan Wright Reservoir. There he can open the gates and shake it west through Five Dollar bog to Turf Reservoir, where it follows the drop of the land into a bog called Nadine.

If he chooses, Bill Haines can run the Oswego River sideways.

“We can use water several times,” he said. “It’s a complicated water system. But you can make it do what you want it to do if you understand it.”

It was harvest time. Haines parked the Ford near a flooded bog. A worker drove a John Deere tractor through the bog, knocking berries from vines.

On each pass, however, the tractor’s path was blocked by another worker spreading sand across the dam with a yellow bulldozer.

Harvest comes to this bog one day a year. Rebuilding the earthen dams can be done anytime. Yet here sat this lumbering earth mover, in the way, threatening to throw the entire harvest off schedule.

“I’m not quite sure why they chose to do that today,” Haines said quietly.



Haines fell silent. His pale cheeks reddened with anger. I asked whether sometimes he finds it difficult to restrain his power, to defer to his managers, to quell his urge to start screaming at his workers to move that damn bulldozer out of the way, now, damn it, now.

Bill Haines said nothing. He clenched his jaw and nodded yes.

NEWSDAY

### Officials say no raw sewage leaked into Huntington Harbor from broken pipe

State DEC said it will monitor the plant and plans additional inspections, and Huntington officials said the broken pipe will be replaced this week.

By Sophia Chang

November 20, 2018

The Suffolk County Department of Health Services issued a precautionary health advisory on Monday for Huntington Harbor after a broken pipe was found during the weekend inside a tank at the Huntington Sewage Treatment Plant on Creek Road.

The pipe malfunction led to elevated levels of "total suspended solids" — particulate matter floating in the water — being discharged into Huntington Harbor around 2 a.m. Saturday, according to John Clark, Huntington's director of environmental waste management.

The elevated levels of solids discharge could have lasted from between a moment to as long as six hours — the length of the monitoring cycle, Clark said. Still, he noted, there was no risk to the public.

"There's really nothing significant about the raised levels except that there were increased numbers for a period of time," Clark said.

The town said no raw sewage was ever emitted into the harbor from the plant during the malfunction, and that all discharged sewage was treated as normal.

The Health Service's advisory sent out Monday said "to take precautions before recreating in Huntington Harbor near the Huntington Sewer District Wastewater Treatment facility effluent discharge located near the head of the harbor. The advisory is being issued out of an abundance of caution following a pipe break resulting in the discharge of residual solids. . ." The agency "will be sampling the effluent from the treatment plant located on Creek Road in Huntington, as well as multiple locations throughout Huntington Harbor for bacteriological quality," the advisory added.

The state Department of Environmental Conservation said Tuesday in a statement that it "inspected the Huntington plant this morning and is closely monitoring the plant. Based on our inspection, the plant is undertaking additional steps to stay in compliance. DEC plans additional inspections of this facility as it works through operational issues."

The town "discharge(s) on average 1.9 million gallons per day of treated sewage into the harbor so there is no change to the fact that 'treated sewage' after going through the complete [Sewage Treatment Plant] process (sludge removal, de-nitrification, UV disinfection, etc.) was discharged into the harbor after being properly treated," Clark wrote in an email statement.

After discovering the broken pipe, which had come loose from its coupling, town employees manually "perform functions in that SBR tank" that include adding polymers to settle the solids and removing with the sludge and pumping clean water to another tank. The broken pipe is expected to be replaced by this week, Clark added.

## SUSTAINABLE CITY NETWORK

### Governor Announces Improvements in Rail Infrastructure Statewide

November 19, 2018

Governor Andrew Cuomo announced \$27.1 million to fund rail and port improvement projects across New York State. The grants, from the Governor's Passenger and Freight Rail Assistance Program, will support projects that strengthen infrastructure and economic development vital to the movement of goods throughout the state.

"New York's rail and port infrastructure is critical to local economies across the state, and these grants will not only support existing commercial activities but to help attract new business investments as well," said Governor Cuomo. "With these improvements, we can keep these economic engines running, and ensure safe and efficient travel for both passenger and freight customers statewide."

New York State Department of Transportation Acting Commissioner Paul A. Karas said, "Governor Cuomo's continued investment in rail and port facilities will facilitate sustained economic growth across the state. Under his leadership, New York State has enhanced its position as a vital, competitive entity in the global marketplace."

## PUERTO RICO / VIRGIN ISLANDS

LA PERLA DEL SUR – (Google Translate English)

### They approve research on Punta Cucharas Natural Reserve in Ponce

Report on the Natural Value of the Punta Cucharas area identified in the reserve: 148 species of flora; 56 species of birds; 5 species of mammals; 9 of reptiles; 5 amphibians and 6 fish species

By CYBERNEWS

November 19, 2018



The representative of the Puerto Rican Independence Party (PIP), Denis Márquez Lebrón, announced the approval in the House of Resolution 1026, of his responsibility, which orders an investigation into the Punta Cucharas de Ponce Nature Reserve.

"It is important to carry out this investigation because of the serious damage to the reserve that causes this type of activity and that even adversely impacts tourism in the region. From our legislative office we will promote compliance and we will continue as usual to support the movements of the area that struggle every day to preserve our environment, particularly to the groups that voluntarily dedicate themselves to cleaning, protecting and preserving the area," said Márquez Lebrón in written statements.

The legislator detailed that the legislative research would revolve around the conditions of cleanliness, deforestation, fires, sand extraction, garbage dumps and clandestine races of all-terrain vehicles.

He explained that in June 2004, the Integral Planning Area of the Natural Heritage Division of the Department of Natural and Environmental Resources (DNER) presented a Report on the Natural Value of the Punta Cucharas area of the municipality of Ponce. As part of the aforementioned study, 148 species of flora were identified; 56 bird species (resident and migratory); five species of mammals; nine of reptiles; five of amphibians and six species of fish. Of the 56 species of birds identified, five are endemic while, of the reptile species, the southern gardener stands out, which is protected under the classification of vulnerable.

Resolution 1026 of Márquez Lebrón was approved in the last days of the last ordinary session and belongs to the Commission for the Integrated Development of the Southern Region of the House of Representatives.

METRO.PR – (Google Translate English)

#### AAA plants from Naranjito and Corozal continue to plan improvements after María

The AAA has coordinated more than 200 tankers for these mountain towns

By Cybernews

November 19, 2018



The executive president of the Aqueduct and Sewer Authority (AAA), Elí Díaz Atienza, detailed on Monday the works that have been carried out during the past months in the pump plants of the municipalities of Naranjito and Corozal, which have not yet recovered after the effects of Hurricane Maria.

"Due to the severe damages caused by Hurricane Maria, the Lomas del Viento 1 de Naranjito pump station and the Negros de Corozal filtration plant have experienced intermittent operations ... After the brigades of the northern region established the plan for the work and to maintain stability in the service, the need to buy new equipment was determined; why we are in the process of acquiring what is necessary to meet the needs outlined. Specifically, the AAA has invested approximately 80 thousand dollars," said Díaz Atienza in written statements.

Similarly, the president of the AAA explained that after the passage of Hurricane Maria, the filtration plant Negros de Corozal suffered great damage to the dam and that to maintain the service stable, the agency has installed transformers and electrical equipment. In addition, he said that they invested around 100 thousand dollars in the electrical substation of the dam, although the production of the service has been interrupted by voltage fluctuations.

"Our team works every day to maintain stable service to all sectors that are supplied with these systems. The improvement works are projected to begin in the month of December of the current year, if no inconvenience occurs," the official added.

He explained that as a consequence the sectors that have been affected by the work in the station of Lomas del Viento 1 of the municipality of Naranjito are: Guadiana, Jardines, Los Cerros, Caserío and high parts of Achiote. Similarly, the sectors in the upper parts that are supplied by the Negros de Corozal system that have experienced intermittent service are: Medina, El Pegao, Palos Blancos and Palmarejo plots. Also, the Lomas Valles de Naranjito sector.

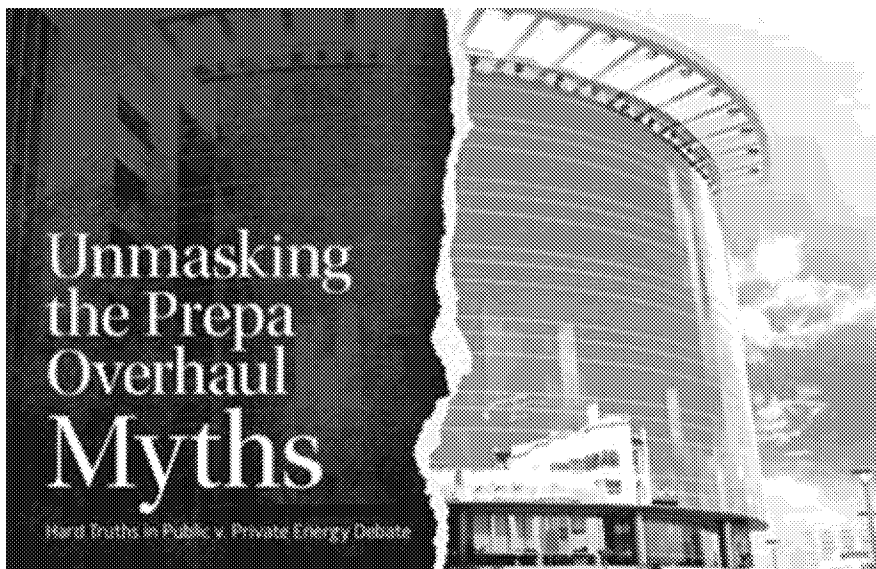
To mitigate the problem of water supply after the onslaught of María, the authority has coordinated more than 200 tankers for the municipalities of Naranjito and Corozal. The trucks have been mobilized by the affected sectors, also they have highlighted oasis for the residents.

## CARIBBEAN BUSINESS

### Gaps in Prepa Vacuum Exposed

By Maria Soledad Davilla Calero

November 19, 2018



While there is consensus that the Puerto Rico Electric Power Authority (Prepa) needs improvement, the bet that privatization will end the utility's monopoly and bring lower prices and better conditions is not a sure one, argued one of the island's top urban planners.

According to David Carrasquillo Medrano, president of the Puerto Rican Planning Society (SPP by its Spanish initials), when expanding Prepa's energy sources, "it takes a lot of money to make that transition. The concern is how much the cost of energy is going to be in the end. If the transition is done in a way that generates debt, it's going to be a problem because it will inevitably increase the cost of energy. Likewise, [the cost] will increase if certain services that are now free get privatized."

The planner explained that a privatized model would likely result in increased charges for upkeep during the distribution stage, "which now is a nominal fee." If more than one company were competing to provide energy services, the increased charge would also need to include the expansion of distribution.

Regardless of the model chosen, Carrasquillo Medrano argues that the government will need to account for the environmental and economic realities of the island's particular regions, as well as decide the areas in which it wants to promote growth. Furthermore, questions about the protocols in case of a natural disaster also need to be determined.

#### **How much room for competition?**

Puerto Rico is experiencing a severe case of urban sprawl that presents the false impression that what has been built is larger than it actually is, the urban planner argued. In a 2010 land study by University of Puerto Rico's Graduate School of Planning, he explained that these constructed areas covered no more than 15 percent of the island.

"The incredible thing is that despite being such a small number, there are no [large] continuous conservation areas; it is all sprawl. Despite being 14 percent [of the land area,] you can't find a significant percentage of [solid] conservation because everything is [intersected] by streets and urbanizations," Carrasquillo stated.

The lack of continuous conservation areas also means a lack of continuously developed areas, which would make it difficult to sustain regionalized for-profit models, because there would not be enough clients in certain areas disconnected from urban centers, especially the urbanizations that are neither urban nor rural but are construction adjacent to highways.

Carrasquillo argues that for-profit models could result in the promotion of urban developments that are not sustainable for the environment and do not respond to the island's economic realities. In fact, Puerto Rico has about 325,000 houses—between summer homes and vacant homes—currently not in use.

While the SPP president explained that deciding which model Puerto Rico implements needs to be the result of adherence to the Land Use Plan and explicit and concrete decisions by the government about which areas it wants to develop, he also believes certain areas need a service-based system.

Another issue affected by privatization, Carrasquillo Medrano explained, is the distribution and transmission stage of the island's energy supply system. If the distribution and transmission stages, which do not generate profit, are separated from energy generation, the government or private company that acquires this concession would need to charge either consumers or the energy generation companies for upkeep of the distribution infrastructure.

Those charges still presume that regardless of the number of companies generating energy, consumers would not be selecting the provider; however, if competition enters into the equation, the matter gets more complicated.

“The thing is that to compete, you need to have separate infrastructure,” Carrasquillo Medrano said. The Planning Society president warned that this doesn't just mean the added costs of building more infrastructure but also the logistics of where to build it. Increasing infrastructure could result in needing to yield or hand over portions of land, or the disruption of more dense zones such as in the San Juan metropolitan area.

#### **Establishing rates more complex**

The average U.S. residential electric rate is 13.12 cents per kilowatt-hour (kWh), more than 8 cents lower than Puerto Rico's 21.17 cents per kWh, but the U.S. average is actually the result of a wide range of rates. According to the U.S. Energy Information Administration (EIA), Washington state has the lowest rate at 9.74 cents per kWh and Hawaii is at the top with an average yearly residential rate of 33.45 cents per kWh.

Although not included in the EIA chart, Puerto Rico would be in third place, wedged in between Alaska at 23.43 cents per kWh and Connecticut, whose annual rate average was 20.88 cents per kWh, although in August, the New England state reported 21.28 cents per kWh.

PRIMERA HORA – (Google Translate English)

[Legisla so that you can take advantage of the debris of hurricanes](#)

By PrimeraHora.com

November 18, 2018



The representative for the District 19 of Mayagüez and San Germán, Maricarmen Mas Rodríguez, announced through a press release the filing of a measure that seeks to order the Executive Director of the Puerto Rico Solid Waste Authority (ADS) to create an effective recycling program to convert the debris of vegetative material collected after the onslaught of Hurricanes Irma and María on compost or some of its derivatives.

"Since Hurricanes Irma and María passed through Puerto Rico in September of 2017, tons of debris have been collected throughout the Island, many of which are vegetative material. It would be a serious mistake to deposit all that vegetative material in landfills, because it can be recycled and transformed into compost or other derivatives. Compost not only has an environmental value, but also an economic one. For that reason we understand that the Executive Director of the ADS is developing an aggressive recycling program to turn this misfortune into a commercial opportunity," commented the legislator affiliated with the New Progressive Party (NPP).

Composting is a technique that imitates nature to transform, more quickly, all kinds of organic waste, in what is called compost or mulch. There are many organic waste that can be composted. In addition, the advantages of this process are multiple, among which are: reduction of environmental pollution; savings in garbage collection; and, the availability of high quality fertilizer.

"With this measure we contribute to improve the environment and extend the useful life of landfills. In addition, it is an economically viable program, because the profits generated from the sales of compost and its derivatives can be used to pay for the program and make it a self-sustainable", added the president of the Commission for Integrated Development of the Region. West.

The ADS is a government agency created under Act No. 70-1978 with the ministerial duty to establish and execute public policy concerning the technical, administrative and operational aspects of solid waste management.

NOTICEL – (Google Translate English)

#### Rosselló will continue to allow construction in flood areas

This was confirmed when announcing construction code

By NotiCel

November 16, 2018

Governor Ricardo Rosselló Nevares announced the adoption of the Puerto Rico Codes of 2018, to update standards and minimum construction requirements but, contradictorily, said that it will continue to be allowed to be constructed in flood areas.

"The Puerto Rico Codes of 2018 make it possible to safeguard the life and safety of the residents of the Island in the face of atmospheric events such as Hurricane Maria. These codes also guarantee safe construction in coastal and flood-prone areas, which protects and encourages the investment of communities, the industry and the tourism sector, "Rosselló said.

However, with every threat of storm or hurricane, the government is the first to ask these residents to leave their homes to take refuge in a "safer" place. Similarly, global trends in response to climate change are precisely for governments to discourage construction in coastal areas.

"We thank the leadership of the Office of Permit Management (OGPE) to adopt these new codes that are essential for construction on the Island, since it had been more than six years since the Codes were adopted without having received any revision", said the first executive.

As explained, the adoption of the Puerto Rico Code 2018 results in savings in insurance policies, as compliance with the insurance industry's requirements in terms of flood cover, hurricanes, earthquakes and fires.

In addition, the codes encourage public and private investment in Puerto Rico; guarantee the investment of federal funds in the reconstruction; and promote the reduction in energy consumption, resulting in the protection of the environment.

The head of the OGPE, Rosana Aguilar Zapata, said that "after hard work we have developed, approved and adopted these ten codes, focused on the specific needs of the Island in accordance with our vulnerable geographical position."

On March 1, 2011, OGPE approved the Puerto Rico Codes of 2011, which were a compilation of amendments to nine of the Codes of the International Code Council (ICC) in its 2009 edition.

As part of the code adoption process, OGPE created the Building Codes Committee, which held more than 30 meetings.

Said committee was composed of several instrumental public agencies; as well as by the Federal Agency for Emergency Management (FEMA, for its acronym in English), the College of Engineers and Surveyors, the College of Architects and Landscape Architects, the Association of General Contractors and the Association of Builders.

In addition, there was the participation of organizations and the general public to submit proposals for amendments from February 7 to April 30 of this year.

The OGPE, with the collaboration of the organizations that compose the Council of the Construction, carried out several orientations; Likewise, notices were published in newspapers, social networks and on the OGPE website.

In addition, access to the documents, manual and codes of the International Code Council (ICC) of 2018 was made available on the Internet pages of the BEPG, the Planning Board, and the OGPE regional offices.

Likewise, space for citizen participation was given through five technical views for the presentation and discussion of the proposed amendments; as well as to receive comments and other recommendations on additional amendments to the codes.

## NATIONAL

Inside EPA

**Local Governments Push EPA Air Law Exemption For 'Prescribed Burning'**



By Stuart Parker, 11/20/18

Local government policy advisers are urging EPA to grant broad Clean Air Act regulatory exemptions for emissions from “prescribed burning” of land that compromise attainment of federal air quality standards, echoing the view of some regulators in the West where increasingly severe and frequent wildfires are worsening air pollution.

EPA's Local Government Advisory Committee (LGAC) in a Nov. 19 letter urges Acting Administrator Andrew Wheeler to craft a regulatory exemption for the prescribed burning of land, a practice which uses controlled fires to burn away excess vegetation in an effort to avoid uncontrolled wild fires. The group offers the advice as EPA's Office of Air and Radiation develops its National Program Guidance for fiscal years 2020-2021.

The agency's “exceptional events” policy currently allows state air regulators to exempt air quality data gathered during wildfires, but not always during prescribed burning, from demonstrations of compliance with national ambient air quality standards (NAAQS). Critics say this policy discourages states from employing prescribed burns to reduce the potential for much larger and more destructive wildfires, such as those recently seen in California.

Both prescribed and wildfires are large sources of particulate matter (PM) and ozone air pollution, but massive wildfires cause much more severe air pollution and are a serious threat to life and property. Fires can result in levels of coarse PM (PM10) and the smaller fine PM (PM2.5) far in excess of NAAQS limits.

“LGAC believes that prescribed burning, an integral part of the National Cohesive Wildland Fire Management Strategy, is an important forestry management tool that is not adequately addressed by EPA,” the group says. “Wildfires are exempt from the Clean Air Act as exceptional events, yet prescribed burning, which can be used to decrease the risk of wildfire, is not exempt and can cause an area to fall out of attainment for PM2.5 or PM10,” the group says.

EPA updated its exceptional events rule in 2016 to ease state regulators' ability to exclude events such as wildfires and dust storms from NAAQS compliance. The policy can exempt prescribed burns as “exceptional,” but does not do so automatically. EPA's website states, “Exceptional events may include wildfires, high wind dust events, prescribed fires, stratospheric ozone intrusions, and volcanic and seismic activities.”

The U.S. Court of Appeals for the District of Columbia Circuit in July upheld the rule against environmentalists' legal challenge in NRDC v. EPA, in which environmental groups said EPA's definition of “natural event” was unlawfully broad and could include certain events caused in part by human activity. However, the exceptional events rule does not in any case require that all qualifying events be “natural.”

EPA recently updated guidance on related topics including wildfire smoke and ozone, and plans several more steps. In a presentation to the National Association of Clean Air Agencies fall business meeting in October, senior EPA air staffer Anna Marie Wood said the agency plans more steps this year, including updated high winds guidance, new guidance on intrusion into the lower atmosphere of stratospheric ozone, and a “clarification” memo on consideration of data under the policy. Early in 2019, EPA plans to release a guidance expressly on prescribed fire and ozone.

#### LGCA's Recommendations

Meanwhile, LGAC in its letter also promotes increased use of wood heating stoves, saying, “utilizing wood stoves can be a major form of fuel reduction for wildfire management.”

The group says, however, that “communities and residents need access to programs that can help them upgrade their wood stoves to more efficient, cleaner models at little to no cost.”

Wood stoves and similar devices are a significant source of PM. Stove “change out” programs have proven popular in the past, but require funding from local, state or federal sources.

EPA is also poised to issue a proposed rule and advance notice of proposed rulemaking aiming to ease compliance by wood stove makers and retailers with Obama-era rules further restricting PM emissions from new wood stoves, and also setting limits for hydronic wood heaters, forced-air furnaces and other wood-burning devices. The proposed rule would allow retailers to “sell-through” for a fixed period devices not compliant with tougher emissions limits that are due to apply in 2020.

The LGAC in its letter also welcomes EPA's general focus on reducing the number of NAAQS “nonattainment” areas. States generally seek to avoid nonattainment, which brings with it obligations for tougher pollution controls that can stifle industrial expansion. LGAC “believes that to work on individual NAAQS and address air problems, the cumulative impact of multiple air pollutants and sources should be compiled for context, including background levels, thermal inversions, and transported air pollution. These challenges do not seem to be taking into consideration for meeting standards for NAAQS.”

The group “encourages the EPA to collaborate more with manufacturers and utilities” on air pollution issues and “believes that civil penalty guidelines need to be revised,” but does not specify how.

Finally, LGAC says “EPA should also consider poly-per-fluoroalkyl substances (PFAS) related to the air. While much attention has been given to addressing PFAS contamination of water sources, the contaminant is highly likely to be found in the air as well.”

However, the panel cautions that, “our detection capabilities may outstrip our removal capabilities for PFAS in the air, so particular attention should be paid to ensure communities are not asked to do the impossible.”

Mother Jones

### **Northern California’s Homeless Can’t Escape Wildfire Smoke**

<https://www.motherjones.com/environment/2018/11/northern-californias-homeless-cant-escape-wildfire-smoke/>

By Sarah Ruiz-Grossman 11/21/18

As a smoky haze still hung over the San Francisco Bay Area on Monday, more than 10 days into the deadly Camp fire farther north, one of the region’s most vulnerable groups, its homeless residents, couldn’t easily seek safety indoors.

“People who are housed get the respite of their home in the evening, some with jobs have [the] respite of the office during the day,” Catholic Charities of Santa Rosa director of shelter Jennielynn Holmes told HuffPost on Monday.

“These people have neither,” she added, speaking of the approximately 3,000 homeless people in Sonoma County, around two-thirds of whom live outdoors. “They’re exposed all day long.”

Since the Camp fire started on Nov. 8—killing 77 people so far and burning more than 11,000 homes—smoke from the blaze has filled the skies and traveled down to Sonoma County and the Bay Area, a three hours’ drive south.

“People who are housed get the respite of their home in the evening, some with jobs have [the] respite of the office during the day. These people have neither.”

The Bay Area’s air quality has been considered “unhealthy” for days, with an Air Quality Index of 238 on Friday and 179 Monday, per the Environmental Protection Agency. Any figure above 100 would be considered “unhealthy for sensitive groups,” and above 150 is “unhealthy” for everyone. Schools have closed as a result.

The AQI measures how much “particulate matter” is in the air—or microscopic pieces too small to be caught by our lungs’ filtration system—which can then enter our bloodstreams, posing potential health risks to anyone breathing it in, particularly people with respiratory issues.

Research has shown that homeless populations report higher rates of respiratory issues such as asthma or chronic bronchitis, since they deal with added risk factors like living in crowded spaces, poor nutrition, unreliable access to medical care, and regular exposure to air pollution from living or spending a lot of time outdoors.

Homeless people sleeping on the streets of San Francisco and other Northern California cities have been exposed day and night for the past week to bad air pollution—and even those who have access to beds in shelters or other housing often still have to leave during the day, including to work.

“My youth, particularly those with respiratory issues, have been complaining that their chests are tight, they’re finding it harder to breathe, their eyes are burning a lot,” said Monica Steptoe, associate director at Larkin Street Youth Services, which runs a shelter in for 18- to 24-year-olds in San Francisco.

Steptoe says her group serves “a lot” of youth with asthma, some with respiratory infections. In recent days, some reported that friends living on the street had to go to the hospital due to difficulty breathing.

While the youth staying in Larkin Street’s shelters usually have to leave every day at 8:30 a.m., with the recent air pollution, the group has been letting them stay or directing them to its drop-in center. But even in the shelter, polluted air still “seeps in” through the cracks in the old building’s walls, Steptoe said.

Some of the young adults also have delivery jobs riding bikes outdoors all day.

“They don’t want to lose their jobs,” Steptoe said, noting that many homeless youths won’t stay inside as a result, even though staff members encourage them to. “Employment is everything to them.”

Amid the worsening air pollution, San Francisco’s department of homeless services had distributed about 1,600 masks to homeless people as of Saturday, according to the agency’s communication manager Randolph Quezada. The team also administered more wellness checks on homeless residents and added additional beds to the shelter system last week, Quezada said.

But these efforts won’t be enough. The city has about 2,300 beds total in its shelters, according to Quezada. Meanwhile, San Francisco had about 7,500 homeless people, including more than 4,300 who were unsheltered or living outdoors, according to its latest count in 2017. And not all shelters are open 24 hours a day, prompting city officials to direct people to centers that are open all day, as well as other public places like libraries.

Holmes said members of her group in Sonoma had “definitely” seen the recent air pollution affecting the homeless people they serve. They’ve had to transport some people with asthma or severe lung issues to urgent care in recent days.

It’s not only the air quality that Northern California’s homeless residents have to worry about. The region’s available housing stock has once again shrunk as the Camp fire burned through about 10,000 homes around Paradise, making it that much harder for the currently homeless to find affordable housing to move into.

After last year’s deadly fires in Sonoma and Napa burned more than 4,500 homes around Santa Rosa, the area’s number of homeless people rose about 6 percent—the first increase after years of decline, Holmes said.

“The reason they can’t escape [air pollution] is because there is not enough low-income housing,” said Steptoe, noting that the Bay Area’s notoriously high housing prices make it hard for homeless people to access affordable housing. “People can’t even afford housing who have jobs.”

Rains are expected to come by mid-week, which could offer some respite from the fires and improve air quality. But then the area will brace for the risk of mudslides from the downpour.

As unhealthy levels of air pollution become “part of the new normal with climate change,” Quezada said, serving a homeless population exposed and vulnerable to such bad air quality is just “something we have to work through.”

San Francisco Chronicle

**Pre-winter storm helps clear Bay Area air, more rain expected**

<https://www.sfgate.com/bayarea/article/Pre-winter-storm-helps-clear-Bay-Area-air-more-13411520.php>

By Sarah Ravani, 11/21/18

The Bay Area’s smoky air finally started to dissipate early Wednesday as light rainfall swept the region, officials said.

The storm, which is expected to bring light to moderate rainfall to San Francisco and surrounding cities, is a precursor to a series of storms that will last into early December, said Rick Canepa, a meteorologist with the National Weather Service.

“There will be some breaks at times,” he said. “We are still mostly looking at a bunch of systems coming through, which is excellent news.”

The last time the Bay Area had any rain was in early October, he added.

By early Wednesday, San Francisco had received .02 inches of rain. Some parts of the North Bay had received up to .05 inches, Canepa said.

The storm was expected to get stronger throughout the day, Canepa said, before noting that heavy showers aren’t expected.

Over the last week, fine particles in the air from the Camp Fire in Butte County has kept the region under a red alert, which rates air quality as “unhealthy.”

But on Wednesday, San Francisco’s air quality had been downgraded to “moderate,” which is unhealthy for “unusually sensitive groups,” according to the Environmental Protection Agency’s Air Quality Index.

The area of the Camp Fire remained unhealthy despite heavy rainfall expected later in the day, according to the EPA.

Paradise — the town hit hardest by the blaze, which has burned 153,336 acres and is 80 percent contained — can expect up to 6 inches of rain this week, according to the National Weather Service.

The last time the town saw any precipitation was April 7, when it received 5.75 inches of rain. A new storm system will move into the region Thursday and again Tuesday, Canepa said.

“The vegetation is so parched and the ground is so parched, it will act like a sponge and just take it all in,” he said.

E&E News

**'It's not a happy place'**

<https://www.eenews.net/climatewire/2018/11/21/stories/1060107165>

By Maxine Joselow, 11/21/18

President Trump has failed to stop climate change work at EPA.

The administration has repeatedly tried to slash the agency's climate funding, only to be rebuffed by Congress. That has left a small cadre of EPA climate experts in an awkward position, working in jobs they know their boss would prefer to ax.

Some EPA climate staffers have left the agency since Trump — who has called climate change a "hoax" — entered the White House. Others continue to show up for work every day despite staff cuts, flagging morale and a lack of support for their work from 1600 Pennsylvania Ave.

"It's not a happy place," said an EPA staffer familiar with the agency's climate work. That employee spoke to E&E News on the condition of anonymity.

Among EPA's climate workers: a small but dedicated team of career staffers in the Climate Change Division in EPA's Office of Air and Radiation. They work on initiatives aimed at protecting the ozone layer and improving regional air quality, among other things.

"We still have ongoing work that's basically a carryover from previous years," the EPA staffer said. "So it's good that we're still producing science."

But Trump's repeated requests that Congress zero out funding for climate work has taken a toll on employees.

"The morale is pretty low," the EPA staffer said. "We all joke about it. You kind of have to have a little bit of gallows humor to keep going every day. We say things like, 'Why don't we just ask Trump, because I hear he has a good intuition for science?' That kind of stuff."

In an interview with the Associated Press earlier this year, Trump addressed his stance on climate change, extolling his own "natural instinct for science".

Climate work in crosshairs

Trump's fiscal 2019 budget request targeted hundreds of millions of dollars in climate science and climate mitigation efforts across federal agencies, including EPA and NASA.

The phrase "climate change" only appeared once in the narrative summary of the budget request, and that was for the proposed elimination of EPA's Climate Change Research and Partnership Programs. Also on the chopping block was EPA's Atmospheric Protection Program.

The proposed cuts drew cheers from conservatives who take issue with mainstream climate science.

"I think that the EPA needs major budget cuts, and I would support including their climate change work in those budget cuts," said Myron Ebell, director of the Competitive Enterprise Institute's Center for Energy and Environment, who led Trump's EPA transition team.

"In terms of the climate program in particular," he added, "it would be better to just get rid of it and start all over."

House and Senate appropriators ended up rejecting the president's calls for steep cuts, with programs at EPA and the Interior Department ultimately receiving a boost in funding.

Budget request aside, though, Trump's hiring freeze has hollowed out staffing at EPA. That's trickled down to the climate division.

Shortly after his inauguration in January 2017, Trump signed a presidential memorandum implementing a hiring freeze for all federal agencies. The Office of Management and Budget lifted the hiring freeze that April, but EPA decided to temporarily keep it in place to meet Trump's long-term workforce reduction goals. Hundreds of EPA staffers took buyouts offered last year.

Even before Trump took charge, the climate division was feeling the effects of hiring freezes. And more people have left under the current administration without being replaced.

"We haven't hired anyone in the last four or five years," the EPA staffer said. "After the election, we got three or four people in who were fellows or coming from other parts of the agency. I think those are the only people we've hired in the last seven years. There were hiring freezes before Trump."

The source added, "A lot of people have left [under Trump]. A lot of people are looking for other positions. And there's not a lot of effort by our management to keep people, which doesn't feel great."

Dina Kruger, who was director of EPA's Climate Change Division until 2011, said some of her former colleagues are still at the agency.

"There has definitely been staff attrition on the climate issues," said Kruger, who now leads the consulting firm Kruger Environmental Strategies LLC. "Many of the Climate Change Division staff that worked for me are still hanging in there, and I think it is probably the same for the Climate Protection Partnerships Division."

"But people have left, in the climate change area as well as in many other offices at EPA. In addition, some climate staff have found other jobs at EPA that make them feel better about their work."

#### Censorship concerns

Career employees in the climate change division have experienced some censorship from political appointees higher up the chain, the EPA staffer said.

The division is responsible for managing EPA's webpage on climate change indicators. Under past administrations, the webpage was updated every six months as new data became available.

"When I was there, [EPA] regularly put out this climate change indicators report," said Janet McCabe, who served as acting EPA air chief under President Obama. "It was really great because it had an increasing number of indicators out in the real world, and it cataloged the impacts of climate year after year."

"It included things like snowfall, ice melt, sea-level rise or ticks," McCabe added. "There were a bunch of real-world indicators that provided this great timeline of how climate change was affecting these metrics."

Under Trump, however, the climate change indicators webpage has languished.

"It hasn't been updated since 2016," the EPA staffer said. "Every year, we get a new data point. The Arctic sea ice extent for that year, for example. Or a new number from [the Centers for Disease Control and Prevention] on Lyme disease cases. So usually we update that site every six months, but we haven't been allowed to."

The management team in the climate division is hesitant to ask political appointees in the Office of Air and Radiation — including Senior Policy Adviser Mandy Gunasekara — about updating the site, that person said.

"I've heard rumors that Mandy and team don't approve anything to do with climate change on the website," the source said.

The political appointees may be wary of news stories about federal climate change information disappearing under Trump. The Environmental Data & Governance Initiative, which has been tracking changes to federal government webpages under the Trump administration, frequently points out such changes to reporters.

"No one is willing to touch the website because everyone's afraid of the news stories that say, 'EPA changed this,'" the EPA staffer said.

Career EPA staff members are reluctant to talk to the press about climate work under Trump. "They have to be super, super careful," Kruger said.

EPA's press shop didn't respond to a request for comment for this story.

'Hands-off-the-science attitude'

Still, under Trump, staffers in the climate division have continued their research on how climate change affects human health. They've also done work on air quality and vector-borne diseases.

And their economic modeling will inform the next National Climate Assessment, a report summarizing the impacts of climate change in the United States. The report is expected to be released next month.

"It's hopefully coming out in December. All signs point to it coming out then," the EPA staffer said. "It's been a surprising relief how little interference there has been from the administration politically with that. They have mainly maintained a hands-off-the-science attitude. They don't want to be seen as manipulating the science."

In addition to the Climate Change Division, the air office's Office of Atmospheric Programs includes a Stratospheric Protection Division, which is responsible for implementing Title VI of the Clean Air Act on stratospheric ozone protection.

McCabe recalled that during the Obama administration, the Stratospheric Protection Division worked on the Kigali Amendment to the Montreal Protocol, which aimed to ratchet down the use of ozone-depleting chemicals.

The division also worked with the State Department on international climate efforts leading up to the Paris climate accord and the Conference of the Parties to the U.N. Framework Convention on Climate Change, McCabe said.

It remains unclear what the division has accomplished under Trump.

The Kigali Amendment has not been ratified by the U.S. Senate, and the Trump administration has abandoned the Obama administration's 2015 rule aimed at phasing out the use of potent heat-trapping gases known as hydrofluorocarbons.

Trump has also threatened to withdraw the United States from the Paris Agreement, and the White House plans to send another fossil-fuel-touting panel to the next Conference of the Parties.

Kruger said career staffers will adjust to the reality that they won't be working on the kinds of climate rules that came out of the Obama EPA.

"In my view, the majority of career staff at EPA are going to do what they can do," she said. "But they are not going to try that hard, and they are certainly not going to be burning the midnight oil doing the kinds of rules that we were doing during the Obama administration."

CBS News

### **Lead in America's water systems is a national problem**

<https://www.cbsnews.com/news/lead-in-americas-water-systems-is-a-national-problem/>

By Rachel Layne, 11/21/18

It has been four years since the story of lead-contaminated water in Flint, Michigan, first riveted the country. Yet in recent weeks, news about lead-contaminated water and sluggish government responses are surfacing across the nation from cities including Newark, Chicago, Detroit, Baltimore and Milwaukee.

There is no acceptable level of lead in drinking water, according to the Centers for Disease Control and the U.S. Environmental Protection Agency. So why are so many municipalities, homeowners and schools still finding lead in their systems today?

One reason may be aging infrastructure and the cost to replace old water pipes and lead solder used in household plumbing. Drinking water is delivered via 1 million miles of pipes across the U.S., much of them laid in the early- to mid-20th century with a lifespan of 75 to 100 years, according to a 2017 report from the American Society of Civil Engineers.

Those pipes are being replaced at an average rate of 0.5 percent a year -- at that pace it would take roughly two centuries to renew the whole system at a cost of around \$1 trillion, according to one estimate from the American Water Works Association. Meanwhile, a 2016 CNN report found that more than 5,000 U.S. water systems serving roughly 18 million people violated EPA rules for lead in water.

#### The last-mile problem

A September report from the Government Accountability Office outlines one reason it can be difficult to pinpoint when and where lead issues may pop up: Many problems lurk in pipes that link a municipal system to homes, and those links are often at least partly on private property. That makes it hard to locate them, especially given what the GAO notes is a lack of records about the locations of lead service lines.

When the EPA's lead and copper rule was first implemented in 1991, the agency estimated that about 10 million lead lines were in service nationwide. An estimated 6.1 million remain in U.S. communities today, suggesting some progress in removing them, according to a 2016 AWWA study. The cost for the remaining removals? About \$30 billion, the analysis estimated. Among the lines left, the largest concentration -- 3.4 million -- is in the Midwest.

In Newark, the nonprofit Natural Resources Defense Council sued earlier this year after the organization said reports showed the city knew of lead in the water beginning in early 2017.

"The city has really been in denial and shrugged their shoulders and said our water is safe, people should drink it, until just a couple of weeks ago -- until we sued them and asked for an injunction on behalf of the citizens in Newark to clean up the water," the NRDC's Erik Olson told CBS News earlier this month.

The group sued Newark for violating the federal drinking water law, saying lead levels are "some of the highest" of "any large city" nationally, a problem the NRDC compared to Flint. Newark officials told CBS it's changing the way it treats water at one plant and is embarking on a lead-pipe replacement program.

But Newark is still looking into how it pays to replace aging lead pipes without putting a big burden on residents, Politico reported. New Jersey freed up \$500 million in bonds to help its cities pay for the problem, but many residents still can't afford their share of the bill. Newark can only guarantee replacing lead pipes with copper ones that won't top \$1,000 for homeowners. Newark needs more help from the state or EPA to slice costs, Politico said.

#### Certified testing is best

Lead in water is invisible and odorless. It can enter drinking water when pipes that contain lead corrode. That happens when water is high in acid that induces corrosion in pipes and fixtures.

Testing at the tap using a certified lab is the best way to measure levels in household water, according to the AWWA. And the EPA recommends a state certification officer for consumers who choose to have their own water tested. It can be hard to test for results on your own.

Another problem, according to the GAO, is a lack of information about the private property locations of lines to homes from public systems.

The GAO noted that, of 43 states that responded to an EPA inquiry on lead in 2016, 39 reported that they had encouraged water systems to publicize inventories of such pipes. Few, though, completed those plans. Of the 100



largest U.S. water systems, just 12 had provided public information on the inventory of lead service lines as of January 2018, the GAO report found. Among states, the EPA lists Massachusetts and Washington as the leaders in lead line replacement efforts.

"By sharing information with all states about the approaches that some states and water systems are using to successfully identify and publicize information about lead service lines, including responses to potential challenges, EPA could encourage states to be more transparent to the public and support the agency's objectives for safe drinking water," the GAO concluded.

#### A need for urgent action

In April, the EPA announced new funding of as much as \$5.5 billion in loans to help fund projects through the federal Water Infrastructure Finance and Innovation Act program.

And this summer, the EPA's Office of Inspector General said the agency must take steps to react more quickly during public health emergencies. Flint's tap water became contaminated with lead in 2014 after officials switched from the Detroit system to the Flint River.

One recent EPA update of a "toolkit" for schools and child care centers stresses how to address potential contamination more clearly, according to some watchdog groups.

"Overall, the new toolkit is an improvement," the nonprofit advocacy group Environmental Defense Fund wrote in an October post. "While the protocol itself is largely the same, the new toolkit is more user friendly and written for the non-technical audience, making it more likely that school and child care staff will use it."

#### Chemical & Engineering News

##### **Treatment for lead in drinking water is evolving. Will the U.S. EPA catch up?**

<https://cen.acs.org/environment/water/Treatment-lead-drinking-water-evolving/96/i47>

by Janet Pelley, 11/21/18

Tap water from Green Bay, Wis., never exceeded the U.S. Environmental Protection Agency's lead action level until 2011, when concentrations of the brain-damaging metal suddenly spiked to over 25 ppb. EPA requires drinking water utilities to take steps to cut lead when amounts rise above 15 ppb.

The standard solution for Green Bay, according to EPA's 27-year old Lead & Copper Rule, should have been simple: Adjust the water's pH and buffering capacity and maybe add a corrosion inhibitor, such as orthophosphate, to inhibit lead's leaching from lead-containing pipes, solder, and fixtures.

"However, as an engineer, I wanted to know what went wrong with our system and made it release excess lead after many years of stability," says Nancy Quirk, general manager of the Green Bay Water Utility.

So she called in Abigail F. Cantor, a chemical engineer with consulting firm Process Research Solutions. Cantor recommended flushing the pipes with a high-velocity stream of water to scour off a crumbly iron-and-manganese scale on pipe walls that was sending lead-laden particles throughout the water system.

The scouring also removed slimy films of microbes that line pipes and affect lead chemistry. Green Bay traced the source of a microbial hot spot in the system to the addition in 2005 of a second supply pipeline bringing Lake Michigan water to the treatment plant, says Andrew Jacque, founder of another consulting firm, Water Quality Investigations. Water sat for longer times in the new pipe than in the old one, boosting the population of microorganisms that coat and corrode water pipes.

Flushing the water mains and supply lines thinned out the microbes while knocking off the scale and helped pull Green Bay's system back into compliance with EPA's rule. To institute a more permanent fix, the city is on track to replace all its lead service lines by 2020.

Green Bay's experience exemplifies a new understanding of the complexity of lead behavior. How best to tame lead releases from water-supply pipes has become a hot topic for cities across the nation making headlines because of their lead problems. It's also a top concern for EPA, which has signaled that it will revise the Lead & Copper Rule in 2019.

Experts have urged EPA to require complete replacement of lead service lines, as Michigan did this year when it revised its state regulation after the drinking water crisis in Flint. But replacing the nation's 7 million lead service lines could take decades. Meanwhile, drinking water utilities will still have to control lead corrosion. Accomplishing that will require adaptations in light of new information.

When lead pipes corrode, they release positively charged lead ions into the water. If these ions remain dissolved, they get carried along with water and emerge from taps in homes, schools, and businesses.

Yet some of the lead ions will form new insoluble compounds with oxygen, carbonates, chlorides, sulfates, and other chemicals in the water. If the insoluble compounds form a dense layer on the pipe wall, corrosion will slow or even stop.

Therefore, EPA's Lead & Copper Rule encourages water systems to tune the pH and buffering capacity of the water to maximize production of insoluble lead carbonates. The rule also endorses the addition of orthophosphate, which forms highly insoluble lead phosphates that coat pipe walls.

But the chemistry of water pipes is not that simple, says Graham Gagnon, an environmental engineer at Dalhousie University. The water also contains disinfectant; inorganic carbon; iron, manganese, and aluminum compounds; and naturally occurring microorganisms and their nutrients—organic matter, nitrogen, and phosphorus. The inorganic components create complex mineral scales that can trap lead on pipe surfaces or promote its release in particles that travel to the tap, depending on scale composition. The microbes form a slimy biofilm on pipe walls that interacts with the pipe and the water.

How microbes affect lead levels in drinking water is an emerging area of research. A lead pipe seems like an inhospitable place for a microbe. But many bacterial species, particularly those found in metal-contaminated soils, tolerate metals, Gagnon says. While some scientists question the role that microbes play in lead release, new research suggests they could be important. For example, some microbes secrete acids that can affect metal corrosion.

And then there's the organic matter, which naturally occurs in drinking water supplies and is produced by pipe-dwelling microbes.

"The impact of organic material on lead release is grossly underestimated," Gagnon says. He and his team have examined how lead release is impacted by humic acid, a form of organic matter naturally found in drinking water. In lab experiments, the researchers found that humic acid complexes with and sequesters dissolved lead. That sequestration prevents lead-corrosion reactions from reaching equilibrium, promoting more lead leaching.

Microbial biofilms, meanwhile, incorporate a protective matrix of proteins and polysaccharides that cloaks the microbes. Gagnon and colleagues have also found that polysaccharides and proteins similar to those found in biofilms have a strong ability to bind with soluble lead. "At a mechanistic level, the findings reinforce what Cantor and her colleagues have found in the field," he says.

Another example of lead behavior deviating from the Lead & Copper Rule paradigm occurred in 1992, when lead levels exceeded the action level in the drinking water of Madison, Wis. Lead concentrations in Madison were highly erratic from home to home, Cantor says. She collected sections of supply pipes and sent them to EPA scientists, who examined the scales. Their analysis revealed that iron from cast-iron water mains and manganese from well water had accumulated onto pipe walls and served as an efficient trap for lead. But the crumbly scale was prone to disintegrate

into particles, some of which contained more than 70% lead by weight. The city dropped its lead levels to 3.6 ppb by controlling manganese in its source water, cleaning off aged scales with high-velocity flushing, and removing all its lead service lines—similar to the approach Green Bay is now taking two decades later.

Other water systems are under pressure to add orthophosphate to control lead, to make an extradurable lead-phosphate scale. Water utilities are reluctant to do this, in part because excess phosphate can affect wastewater treatment and drive algal blooms downstream of sewage plants. Research is also starting to show that the orthophosphate approach may also not work to control lead as well as advertised.

In one study, EPA researchers analyzed pipes from a drinking water system using blended-phosphate corrosion inhibitors. Instead of solid lead phosphate on pipe walls, however, the scientists discovered a porous, amorphous layer rich in aluminum and calcium as well as lead and phosphorus. Amorphous scales may be vulnerable to breaking away from the pipe because of physical or chemical disturbances.

Orthophosphate may also fail to block lead's leaching caused by galvanic corrosion, other studies suggest. Galvanic corrosion occurs when two dissimilar metals come in contact with each other, such as when lead pipes or solder contact copper pipes. Scientists in Canada and the U.S. have found that orthophosphate does not reduce lead release related to galvanic corrosion and may instead accelerate it.

Other research has shown that when some utilities start dosing with orthophosphate to cut lead levels, dissolved lead levels drop almost immediately—while it can take six months or more for particulate lead levels to decline. Yet other studies suggest that higher doses of phosphate can actually increase water contamination with particulate lead.

These results prompted engineers Daniel Giammar of Washington University in St. Louis and Yandi Hu of the University of Houston to investigate what makes lead phosphate particles stick together and adhere to pipe walls or break apart. Hu's lab has found that the addition of excess phosphate causes lead phosphate particles to become negatively charged, so they repel each other and resist aggregation.

"Although the addition of excess amounts of phosphates can lower dissolved lead concentration, it could result in higher particulate lead levels in tap water," Giammar says.

The growing consensus is that water utilities need to study their particular system to determine optimal treatments rather than counting on simple solubility equations.

EPA's guidance on the current Lead & Copper Rule "contains nice flow diagrams that you follow like a cookbook, but I tell my clients that they have to stop doing this because there is no one-size-fits-all solution," says David A. Cornwell, president of consulting firm Cornwell Engineering Group. "Don't just switch to orthophosphate without doing sufficient studies beforehand because you don't know what's going to happen, and you could disturb the chemistry of your pipe scales and make things worse," he says.

The recent lead crisis in Flint, Mich., is the poster child for what happens when regulators don't look at the big picture, Cantor says. When the city switched water sources to the Flint River, the water chemistry changed. The river water destabilized old scales and introduced more nutrients and microbes into the distribution system.

But the lure of an ostensibly simple solution remains strong. When Michigan updated its state regulations in June, it addressed shortcomings in water sampling and mandated removal of lead pipes but left corrosion-control guidelines largely alone.

And EPA might not do much better at the federal level. As it looked ahead to updating its Lead & Copper Rule, last year the agency floated a proposal that would require all water systems to use the same corrosion-control treatment. That approach could risk unintended consequences, such as increased lead release from destabilized pipes or phosphorus nutrient loading to rivers, Quirk says.

A better way forward to protect public health, she says, is to use new research that takes a more holistic perspective of pipe systems and their complex chemistry.

North Carolina Health News

### **New Data Could Change Health Goal for River Contaminant**

<https://www.northcarolinahealthnews.org/2018/11/20/new-data-change-genx-health-goal/>

By Vaughn Hagerty, 11/20/18

North Carolina's health goal for GenX in drinking water would drop by one-fifth if state regulators choose to use preliminary data on the compound's toxicity from the U.S. Environmental Protection Agency.

That newly published data, a reference dose representing a maximum level of daily oral exposure considered unlikely to affect a person's health over a lifetime, resulted from an EPA assessment of GenX's toxicity, a draft of which the agency released on Nov. 14.

The assessment also identified specific potential health hazards posed by GenX: Among other things, the liver may be especially susceptible and available data are "suggestive of cancer."

EPA's proposed reference dose for GenX is 0.00008 milligrams per kilogram of body weight for daily lifetime exposure. That equates to 80 parts per trillion (ppt), a conversion that simplifies comparisons to the concentration of GenX that North Carolina considers safe in drinking water.

Last year, the state Department of Health and Human Services (DHHS) derived its own reference dose of 100 ppt as one of a number of factors used to calculate North Carolina's interim health goal of 140 ppt in drinking water.

In addition to the reference dose, DHHS also based its calculations on potential risks to a particularly vulnerable human population, infants, and assumed that drinking water would account for one-fifth of total exposure to GenX.

Plugging EPA's draft reference dose into DHHS' formula would reduce the health goal to 112 ppt.

Jamie DeWitt, a professor in the Department of Pharmacology and Toxicology at East Carolina University, said: "EPA's proposal appears to align more closely with the state's conclusions, though its methodology differed from the state in a number of ways.

"For example, unlike the state, EPA used statistical modeling techniques. It also used different factors to account for uncertainties such as differences between the ways a mouse and a human might be affected," DeWitt said. "The EPA didn't calculate a health advisory, so we can't compare it directly to the 140 parts-per-trillion health advisory."

For now, the state will stick with the current health goal, DHHS spokesman Cobey Culton said in an email response to NC Health News.

"The EPA report on GenX toxicity is in draft form and is subject to change after the public comment period. In the interim, we will continue to use our provisional health goal for drinking water of 140 parts per trillion that has been evaluated by the Secretaries' Science Advisory Board. When the EPA releases its final reference dose, we will revisit our provisional health goal for GenX."

The EPA will finalize the toxicity assessment following a 60-day window for public comments. [Note to readers, the comment period is not yet open, however we will provide a link to it at [regulations.gov](https://www.regulations.gov) once they do.]

As with the state's health goal, the reference dose is not an enforceable standard.

#### 'Less hazardous than PFOA'

GenX contamination surfaced as a public health issue in June 2017, following media reports that researchers had found GenX and similar substances in the Cape Fear River, downstream from the Chemours chemical plant on the Bladen-Cumberland county line near Fayetteville.

Because conventional municipal water treatment cannot filter fluorochemicals such as GenX, the compounds also wound up in drinking water provided by utilities serving more than 200,000 people in southeastern North Carolina.

Chemours officials said the GenX in the river was a byproduct of a manufacturing process that had been discharging wastewater into the Cape Fear since about 1980.

In November 2017, under pressure from the N.C. Department of Environmental Quality, Chemours stopped discharging its manufacturing-related wastewater.

Asked about the EPA's draft toxicity report, a Chemours spokeswoman pointed out that the reference dose for GenX is larger than that for the substance it replaced, perfluorooctanoic acid (PFOA), also known as C8. A larger reference dose typically indicates less toxicity. EPA's reference dose for GenX is four times that for PFOA, but both numbers are very small.

"While we are in the process of reviewing the draft EPA toxicity assessment for GenX, it is clear from the EPA report that GenX is significantly less hazardous than its predecessor compounds," spokeswoman, Lisa Randall said.

Randall also said that Damian Shea, an N.C. State University professor serving as a Chemours consultant, indicated that using the EPA's reference dose in a formula that assumes consumption by an adult rather than an infant would result in a health advisory of 560 ppt.

Shea, on behalf of Chemours, has criticized the state's calculation of the GenX health goal, urging instead an approach yielding a far higher level: 70,000 ppt.

The Secretaries' Science Advisory Board rejected that argument earlier this year, instead endorsing the 140 ppt number.

Variation in gauging health risks from chemical exposure is not uncommon, DeWitt said.

"Risk assessment is not an absolute science," she said. "It is a process and depends on interpretation of the scientific evidence, which can vary depending on who is doing the interpretation."

"Look at what happens when forecasters try to predict where a hurricane will fall," she said. "We have lots of data to use to make the predictions, but they're not 100 percent accurate. Risk assessments can be like this, too."

Typically, scientists don't test the effects of toxins directly on humans, she explained.

"Even if we did, humans are different, which is an uncertainty factor," DeWitt said. "There's uncertainty around the science due to the types of animals used, the endpoints assessed and other factors."

"Remember, scientific information changes regularly, and how we understand that information changes as our knowledge grows. For example, people used to regularly smoke during pregnancy, and now we accept that it is not at all healthy for a developing baby to get exposed to smoke."

#### 'Data are suggestive of cancer'

The EPA's risk assessment includes a summary of potential health hazards posed by exposure to GenX, based on available animal studies.

In particular, the EPA assessment highlighted the liver as vulnerable.

"Overall, the available oral toxicity studies show that the liver is sensitive to GenX chemicals," according to an EPA fact sheet on the draft assessment.

"Animal studies have shown health effects in the kidney, blood, immune system, developing fetus and especially in the liver following oral exposure," according to the fact sheet. "The data are suggestive of cancer."

The 80 ppt reference dose in the draft report is for chronic or lifetime exposure. In addition, the report included a reference dose for subchronic exposure — more than a year but less than a lifetime — of 0.0002 milligrams per kilogram of body weight, or 200 ppt.

The EPA also released a draft risk assessment for perfluorobutane sulfonic acid (PFBS), another fluorochemical.

Unlike GenX, PFBS "doesn't appear at high levels in N.C. drinking water intakes," said Detlef Knappe, an N.C. State professor and one of the researchers who discovered GenX in the Cape Fear River and downstream utilities.

Philadelphia Inquirer

### **Health officials prepare findings from blood tests of Bucks, Montco residents with contaminated water**

<http://www2.philly.com/philly/news/pfas-blood-test-bucks-montgomery-pfoa-pfos-20181121.html>

By Justine McDaniel and Laura McCrystal, 11/21/18

State health officials have sent blood sampling results to the 235 residents tested in the Bucks and Montgomery County towns where drinking water was tainted by chemicals from nearby military bases and hope to release in weeks a public report on the scope of the contamination.

The testing occurred as part of a pilot program for a federal initiative to sample residents' blood in communities affected by the contamination. Pennsylvania officials will share information from their testing of Horsham, Warminster, and Warrington Township residents with federal agencies to help develop potential testing programs in other communities across the country.

All the blood tests were completed by the end of September, and study participants received their results in October, according to the Pennsylvania Department of Health. On Monday, the health department sent out letters to each person showing his or her results compared to a community summary showing the overall results. Department officials declined to provide a copy of the community summary to The Inquirer and Daily News.

The complete report on the results will be released in December, and a public meeting, yet to be scheduled, will be held, said department spokesperson Nate Wardle.

State health officials originally sought 500 participants for the study, and more than 600 randomly selected people had agreed to participate, but only 235 followed through with getting tested, even after the state extended the deadline. Because a scientific study needs a random sample, officials could not take volunteers.

Pennsylvania was chosen by federal agencies for the pilot program to help officials examine how best to do studies in PFAS-affected areas nationwide.

"That was the entire goal of this project ... to look at how a study can be done on an area that has been affected by these chemicals, to help make sure that robust studies can be done in the future," Wardle said.

The water contamination, made widely public in Horsham, Warminster and Warrington in 2014, threw local residents into uncertainty that would soon be mirrored in communities across the nation. Residents with private wells were given bottled water, and public water supplies were shut off, filtered, or changed, making them free of the contaminants.

Relatively little is known about PFAS, the class of chemicals that seeped into drinking water after being used in firefighting foam at military bases. The scope of health effects on humans remains unclear. Scientists have linked the chemicals to a variety of health problems, including increased risk of liver damage, high cholesterol, thyroid disease, decreased fertility, and certain types of cancer.

A health department study updated this spring found elevated rates of cancer in the three townships, but said the overall results did not show a consistent pattern.

Many have clamored for blood testing and demanded urgent government study of the issue. During the summer, the Environmental Protection Agency created goals for addressing the problem and said it was developing a "PFAS management plan," while agency officials held a string of public meetings nationwide, including in Horsham.

Last week, the EPA released a draft document assessing the toxicity of some other chemicals in the PFAS group. The assessment is open for public comment. The agency is working to release the management plan "as soon as possible," according to a Nov. 14 statement.

Gov. Wolf has also created a PFAS Action Team that is scheduled to hold its first public meeting next week. Patrick McDonnell, the Department of Environmental Protection Secretary, said in a news release announcing the meeting that Wolf is committed to take action on PFAS at the state level "in the absence of a federal response" to set better drinking water standards.

Inside EPA

### **EPA Officials Wrestle With Enforcement Decline Spurred By Trump Policies**

<https://insideepa.com/daily-news/epa-officials-wrestle-enforcement-decline-spurred-trump-policies>

By David LaRoss, 11/20/18

EPA enforcement officials are privately blaming Trump administration policies for a sharp drop in new criminal and civil cases, settlements and other actions despite the agency's public defense of its enforcement record, according to an environmental group's new report that says the officials are weighing options for reversing the decline.

The Nov. 19 report from the group, known as the Environmental Data and Governance Initiative (EDGI), is titled "A Sheep in the Closet: The Erosion of Enforcement at the EPA" and quotes from internal OECA communications that show officials grappling with their office's downturn since 2017. The contents of the report suggest that political leadership at the agency and the White House could be responsible for the shift.

EDGI, which has members from academic institutions and non-profit organizations, cites internal Office of Enforcement & Compliance Assurance (OECA) communications that suggest some staff are looking at options for boosting enforcement in response to the drop under the Trump administration.

For example, the report cites a June 18 email from OECA Principal Deputy Assistant Administrator Lawrence Starfield to regional enforcement directors -- -- which it says is "in EDGI's possession" but is not included with the report -- where Starfield wrote that "there are significant decreases in enforcement and compliance activity across almost all programs and in almost every region."

According to EDGI's summary of the document, Starfield "asked the regional enforcement directors for explanations for the decrease in any program that showed a 10 percent decline from the previous year," and warned them that Assistant Administrator for OECA Susan Bodine "would be reaching out to regional administrators to discuss the declines."

It also cites a separate "EPA internal document from June 14, 2018, titled 'Possible Reasons for Decline in Inspection/Enforcement and Ideas for Reversing,'" where, EDGI says, "OECA leadership considered various reasons for

the abrupt decreases in enforcement action” and floated seven possible reasons for the shift -- most of which are rooted in the Trump administration's industry-friendly posture or its efforts to rein in EPA's enforcement processes.

If accurate, EDGI's accounting of OECA's internal discussions is a marked departure from officials' public posture, where Bodine and others have largely rejected accusations from environmentalists and Democrats that the Trump administration has slashed EPA's enforcement program both through resource constraints and by limiting officials' discretion on when to enforce.

For instance, at a Nov. 13 American Bar Association “forum” on environmental enforcement in Washington, D.C., Bodine described the concept that the Trump EPA is weakening enforcement as a false impression that OECA has moved to “correct.”

“There were some companies that wanted to test EPA's resolve, and did -- to their detriment,” she said.

However, EDGI in the report says a downward trend in enforcement statistics seen in EPA's own report covering fiscal year 2017 has continued in the years since, based on statistics pulled from the agency's Enforcement and Compliance History Online (ECHO) website, and predicts that the FY18 report will be far below even FY17 levels in most respects.

However, EPA in a statement provided to Inside EPA pushed back against EDGI's figures, on the grounds the ECHO data “does not tell the whole story.”

“It appears that the EDGI report on EPA Enforcement relied on preliminary, unverified, 2018 mid-year data. EPA monitors and reviews this information as a management tool to ensure the strength of the enforcement and compliance assurance program. We are compiling and verifying our FY 2018 results. We expect to release those results next month and anticipate they will show a significant improvement from mid-year,” the statement says.

It continues that the ECHO database is a poor measure of EPA's overall enforcement activity because “Regions are not required to report 'informal actions,' and only a few do so. ECHO also does not capture all state actions.”

#### Internal Discussions

In the June 14 document summarized by EDGI, OECA officials describe “a 'consistent message' from the administration 'to slow enforcement'” in the first months after President Donald Trump took office and lament a lack of “resources” for the enforcement office, including failure to replace retiring staff.

The officials also say the agency's push for greater state discretion under the umbrella of “cooperative federalism” is leading to less enforcement in areas where EPA would ordinarily supplement state regulators' work.

And they cite the Trump administration's public industry-friendly messaging as detrimental to enforcement. EDGI quotes the memo as saying that a general impression that EPA “would reduce enforcement or become friendlier . . . led some companies to believe that they have more leverage to push back on EPA settlement demands” which was “amplified by [the] willingness of some senior political leaders to meet directly with defendants,” likely a reference to former Administrator Scott Pruitt's frequent meetings with industry.

As a result of that resistance to EPA action, “some settlements are taking longer to conclude,” EDGI quotes the memo as saying.

According to EDGI, OECA leaders in the memo wrote that Bodine's Jan. 22 guidance for deferring to states on enforcement matters has led some officials to “incorrectly interpret” the policy as an order to “do no inspections and enforcement in authorized states.” But even after correcting those errors, it quotes the memo as saying, the new procedure still requires a more elaborate process for EPA-state coordination that “takes effort, and slows the work.”



Also cited as having an impact is Bodine's separate March 23 memo ordering staff to provide her office with "early notice" of civil cases that they plan to refer to the Justice Department.

Bodine has said the shift is intended to accelerate corrective actions, but critics have charged that it could hinder aggressive enforcement, and EDGI's account of the memo has OECA officials raising that same concern -- saying it "may have sent an 'unintentional signal that certain types of cases are not appropriate.'"

Finally, it says, the agency's overall focus on deregulation as opposed to environmental protection has fueled an impression that enforcement is a low priority.

EDGI summarizes the memo as saying that "headquarters had not shown much interest in enforcement 'measures and regional performance' over the past few years," and quotes a passage that says "anticipated changes in program direction," namely deregulation in areas like air standards and Clean Water Act jurisdiction, "may result in less enforcement now."

Arkansas Democrat-Gazette

### **EPA scientists' dicamba input went unheeded**

<https://www.arkansasonline.com/news/2018/nov/21/epa-scientists-dicamba-input-went-unhee/>

By Stephen Steed, 11/21/18

Emails obtained by the Arkansas Democrat-Gazette through a Freedom of Information Act request show that EPA scientists on Oct. 5 sought 443-foot in-field buffers between areas where dicamba is sprayed and where there may be endangered species.

Those buffers, instead, were set at 57 feet in new regulations announced on Oct. 31 by Andrew Wheeler, the EPA's acting administrator.

The EPA also retained 110-foot downwind buffers from dicamba regulations that began expiring this month and said the new 57-foot buffers for the other sides of the field will provide adequate protection for endangered species. Only certified applicators can spray dicamba, and it is their responsibility to check an EPA website to determine the presence of endangered species, the EPA said.

Scientists with the agency's Environmental Fate and Effects Division, or EFED, sought the 443-foot buffers, according to documents obtained from the University of Arkansas System's Division of Agriculture through the state's open-records law.

The issue of buffers is but one among many in a controversy in which EPA critics say science has been disregarded by the agency and, in some cases, by regulators in states where soybeans are grown.

Thousands of complaints have been filed in several states the past two years alleging that dicamba damaged millions of acres of soybeans and other crops and vegetation susceptible to the weedkiller.

Critics say the EPA's latest restrictions and applicator-training programs, such as those established by dicamba's manufacturers, still do not address the herbicide's "volatility," or its ability to lift off plants as a vapor or gas hours or days after being applied and move to fields even miles away.

EPA representatives visited seven states this summer, held a series of conference calls with weed scientists, state regulators and representatives of the pesticide-industry, and collected data from several field trials conducted the past two years as the agency considered dicamba's future.

While acknowledging that some 1,400 complaints have been made this year of damage to crops and to non-agriculture vegetation in several states, the EPA said dicamba's effectiveness against weeds now resistant to other herbicides outweighed the risks.

## OFF TARGET

In a statement Tuesday, the EPA said its final decision was based on its scientists' recommendations, along with other information from "state regulators, farmers, academic researchers, pesticide manufacturers and other stakeholders." The agency said the draft recommendation obtained by the Democrat-Gazette "was preliminary in nature" but didn't specify whether, or how, the scientists' recommendation had changed.

In its Freedom of Information request, the Democrat-Gazette received a few hundred pages of documents, with most being paper copies of PowerPoint presentations of UA field trials and a dicamba-related thesis by a UA student and doctoral candidate, all of which UA shared with the EPA this summer.

The larger buffers recommended by the EPA scientists arose from the work of Jason Norsworthy, UA professor and weed scientist who ran a large-scale field trial on a 240-acre commercial soybean field this summer to test for dicamba's off-target movement, whether by physical drift as it was being sprayed or by post-application volatility. Earlier this year, Norsworthy was named a Fellow by the Weed Science Society of America, its highest honor, and won its award for top research in 2017.

Monsanto, now owned by Bayer, provided equipment and funding for the study and had representatives on-site during much of Norsworthy's test, which he called one of the largest of its kind in the nation. Norsworthy's experiments showed that the company's dicamba, called XtendiMax, moved off target at least 390 feet in four directions from where it was sprayed.

The company later questioned the validity of those results, according to the Oct. 5 email.

Bayer said Saturday that the UA study was among several that Monsanto helped fund and that its results were dramatically different from results of other tests. "This funding imposed no restrictions on the use or ownership of any data developed by these researchers," Bayer said in a statement.

Bayer also said the EPA "conducted an extensive review prior to issuing continued registration for XtendiMax and based its decision on all relevant science."

Others disagreed.

"The EPA's own scientists recommended a 135-meter buffer that was based on poring over scientific studies such as Norsworthy's," said Bill Freese, an analyst with the Center for Food Safety, one of several groups that have sued the EPA for its dicamba decision in 2016.

"They saw that as science-based, and that it would also give some protection to neighboring farmers," Freese said. "It's pretty incredible when you look at the final decision -- 57 feet-- that EPA higher-ups came through with. I don't see EFED scientists changing their minds, but I do think its important to understand the scientists are under a lot of pressure."

Freese also noted that the EPA has asked for more information on off-target movement, dicamba's effects on other vegetation, pH levels in soils and other issues. "The EPA has approved these pesticides for another two years but, at the same time, they're saying there's so much that we don't know," he said.

Monsanto released dicamba-tolerant cotton in 2015 and dicamba-tolerant soybeans in 2016 without having yet gained EPA approval for a dicamba formulation that became XtendiMax. Monsanto didn't allow third-party independent testing of its dicamba product for volatility during that time.

BASF and DowDuPont also have dicamba formulations approved for another two years.

"It's more evidence of the EPA basing the decision on politics and not science," Steve Smith, agriculture director of Red Gold, an Indiana-based tomato processor, and chairman of the Save Our Crops Coalition, told the Democrat-Gazette by telephone.

"They seem to acknowledge what Jason was saying but, when it came time to actually publish, they took Monsanto's recommendations point blank," Smith said. "I can tell you 57 feet is nothing. I can tell you 110 feet is nothing. I live next to a soybean field, and that farmer did leave a 110-foot buffer, and my trees still got smoked."

In a Nov. 2 email to Norsworthy and other weed scientists, Bob Nichols, a scientist and senior director with the research and marketing group, Cotton Inc., wrote, "Our present experience and data suggest these new EPA guidelines do not significantly reduce the potential for off-target movement."

Norsworthy declined to comment on the email exchanges, but the UA Division of Agriculture issued a statement, saying its scientists have been asked for help several times by the Plant Board and the EPA.

"Bayer, the registrant, continues to challenge public data to the EPA," the UA said. "Questions about decision-making and the final label [for dicamba's use] are the EPA's to answer. We continue to stand behind our weed scientists. We don't have all the answers to the challenges of dicamba, and the herbicide's continued use makes it all the more critical that we ... continue our work in support of the safety of all Arkansas agriculture."

The EPA has been sued in federal court in Washington state over a study, alleged to inadequate, of dicamba's environmental effects on endangered species when it first allowed the herbicide's in-crop use. A couple of dozen lawsuits, including some in Arkansas, have been filed against dicamba manufacturers.

In Arkansas this year, farmers were supposed to stop spraying dicamba on April 16, a cutoff date set by the state Plant Board after receiving about 1,000 complaints of damage last year.

Monsanto and the other manufacturers attributed most of the problems to applicator error and implemented training programs that they say have reduced dicamba's off-target movement and the number of complaints.

While Arkansas had the only ban, other states adopted midseason changes to their regulations, with cutoff dates based on the calendar or on air temperatures.

Even with the April 16 cutoff, the Arkansas board received some 200 complaints, most in midsummer, leading officials to believe that some farmers in the state violated the ban. The board is in the middle of a process to determine how, or if, dicamba can be used in the state next year.

## FIELD TESTS

Two Crittenden County farmers donated a 240-acre field for Norsworthy's volatility tests this summer.

A 38-acre plot of Monsanto's dicamba-tolerant beans was set in the middle of the field, with the rest of the acres planted in beans not dicamba tolerant. Post-spraying tests showed that, as many as 29 days after dicamba was sprayed on the 38-acre plot, non-dicamba soybeans hundreds of feet away had symptoms of dicamba damage. Even plants covered by buckets and tarps during, and shortly after, application showed various levels of damage.

Norsworthy provided his Crittenden County study to the EPA in mid-September, along with other studies conducted elsewhere in Arkansas and other states. He also presented his study to the Plant Board on Sept. 20.

Six days earlier, Bayer representatives canceled a previously scheduled visit with Norsworthy to look over the Crittenden County results. John A. Chambers, a Bayer representative, cited an "urgent conflict" in an email to Norsworthy to cancel the meeting.

In an Oct. 5 email, Mark Corbin, an Environmental Fate and Effects Division branch chief, asked Norsworthy to look over an internal draft prepared two days earlier. The draft said Environmental Fate and Effects Division's position on Oct. 3 was to recommend an "omni-directional" 60-meter buffer, or about 196 feet, for fields that may be near endangered species.

The 196-foot buffers, according to the draft, were "preliminary and contingent on the results of further evaluation" of Norsworthy's study in Crittenden County. The draft then noted that the scientists' subsequent study of Norsworthy's work "suggested that a larger buffer (135 meters) would be appropriate." A 135-meter buffer would be about 443 feet.

"However, some potentially confounding issues regarding this study were presented by the registrant as suggestive that the study was not reliable," the Environmental Fate and Effects Division wrote in its draft. The draft then noted that Environmental Fate and Effects Division scientists and Norsworthy had joined in a conference call Oct. 4 "to get clarification on the potentially confounding issues."

The "registrant" in that reference was Bayer, whose \$66 billion purchase of Monsanto had closed by then.

Bayer said Norsworthy's study showed much higher levels of off-target movement and damage than other studies showed.

Norsworthy addressed all seven issues during the conference call, according to the draft. Norsworthy said Bayer representatives played prominent roles in portions of his study and that climate conditions and the geography of eastern Arkansas, near Crowley's Ridge, could have contributed to more off-target movement there than what was shown in studies in other states.

The EPA draft also indicated that the Environmental Fate and Effects Division scientists accepted Norsworthy's formula for assessing visual soybean damage over Bayer's preferred formula.

The draft concluded: "Based on this discussion, EFED cannot preclude the use of the Norsworthy data in the expansion of the dicamba action area. Acceptance of the Norsworthy data as valid results in the recommendation of a 135-m 'buffer' ... for the purposes of establishing a protective and technically defensible limit."

The EPA's decision to approve dicamba use also went against at least one recommendation of the American Association of Pesticide Control Officers, a body of state regulators, including those in Arkansas. It asked the EPA in late August to set a conditional year-to-year label -- instructions for use -- for in-crop dicamba.

Smith, of the Indiana tomato processor, has long criticized the use of dicamba over the top of soybeans and cotton because of its threat to other crops and vegetation.

He once served on a dicamba advisory board established by Monsanto, which developed dicamba-tolerant soybeans and cotton along with a dicamba formulation designed to be less susceptible to moving off target. Smith has said Monsanto dropped him from the board because of his criticism.

"The widespread use of dicamba is incompatible with Midwestern agriculture," he told Congress in 2010, when Monsanto was still developing its dicamba-tolerant crop system. "Even the best, the most conscientious farmers cannot control where this weedkiller will end up."

## For them, a coal plant bribery scandal is personal

<https://www.eenews.net/greenwire/2018/11/21/stories/1060107209>

By Sean Reilly, 11/21/18

BIRMINGHAM, Ala. — When Johnnie Mae Parrish was growing up on the northern edge of this city, the air pollution from nearby industries was so foul that she slept with a wet washcloth over her nose.

Decades later, many of those plants are gone. But to Parrish, a 69-year-old retired nursing assistant who lives across the street from her childhood home in Collegeville, a largely African-American enclave, the wounds linger.

She still suffers from asthma, her fading neighborhood is part of a Superfund site, and she fears that airborne soot attributed to companies still in business continues to taint her property.

A few years ago, EPA unveiled plans for prioritizing a cleanup in her neighborhood, where the soil is laced with lead, arsenic and hydrocarbons. But Drummond Co. Inc., an influential coal firm eager to skirt financial responsibility, orchestrated an opposition campaign.

A large chunk of Alabama's political establishment backed the energy company.

To Parrish, the power of corporate money is one factor behind the delay. She also sees a more elemental force at work.

"It's definitely a race issue," she said last weekend, touching her dark brown arm for emphasis as several grandchildren played in her front yard, which has had contaminants removed. "Everybody treats this community bad."

In a city with an enduring tradition of racial tension, those concerns aren't new.

In 2015, other residents filed a civil rights complaint asking EPA to cut off funding for the county health department after it renewed the air permit for a Drummond coke plant. The department, they alleged, was allowing plant emissions that had a "disparate impact" on black people living nearby. EPA has yet to act on that languishing complaint.

Now, questions of unequal treatment are flaring again following a corruption scandal that ensnared a Drummond executive, a prominent attorney and possibly Trey Glenn — who just stepped down as head of EPA's Southeast regional office.

While "poor, black people" have been dying of pollution-related causes for years, their plight is getting fresh attention, said Richard Dickerson, who worked for EPA as a political appointee during the Clinton administration and is now a consultant in Birmingham.

"This is a very serious issue, much more serious than it's being treated," Dickerson said.

State and local regulators aren't convinced. Four years after EPA first sought to add the north Birmingham Superfund site to its National Priorities List, the plan is in "purgatory," said Michael Hansen, a local environmental activist.

The Alabama Department of Environmental Management (ADEM), citing county data that show no statistical differences in death rates from cancer and other diseases, remains opposed, spokesman Jerome Hand told E&E News in an email yesterday.

National Priorities List designations "should be based on the scientific facts associated with the site, not demographics," Hand said.

In a separate message, Dr. Mark Wilson, head of the Jefferson County Department of Health, voiced confidence that the last coke plant permit renewal "was consistent with applicable law and protective of all residents." With the permit

again up for reauthorization this year, the department is taking extra steps — such as lengthening the public comment period from 30 to 90 days — to make sure people can have their voices heard, Wilson said.

#### Political allies

The plant at the center of the controversy, known as ABC Coke, has been a smoke-belching fixture of Birmingham's landscape for a century.

Following a criminal trial this summer, a federal jury convicted the Drummond executive, David Roberson, and Joel Gilbert, who had been a partner in the law firm of Balch & Bingham LLP, of bribing a state lawmaker to oppose the Superfund National Priorities List proposal.

Listing the site could free up more money to further the cleanup already underway. It might also leave Drummond — which the federal government has named as one of the companies that may bear responsibility for the contaminated soil — on the hook for millions of dollars in cleanup costs and fines.

Drummond, a privately held corporation headquartered in Birmingham, has long been an influential player in Alabama politics, known for hard-knuckled tactics and generous campaign contributions.

In startling detail, however, the roughly three-week trial showed the degree to which Alabama politicians were willing to do the company's bidding. Then-Gov. Robert Bentley (R), most of the state's congressional delegation and a majority of state legislators went on record against the proposed NPL listing.

In an October 2014 letter, for example, six of Alabama's seven House members voiced concern that the EPA proposal "is unsupported by reliable evidence and that it may undermine economic development in the area."

That letter was drafted by Gilbert, federal prosecutors wrote in a recent sentencing memo. Five of the lawmakers who signed the letter remain in Congress. They include Reps. Robert Aderholt (R), an 11-term lawmaker who chairs the House Agriculture Appropriations Subcommittee; Mike Rogers (R), a senior member of the House Homeland Security Committee; and Bradley Byrne (R), who joined the House in 2013.

Campaign finance records show that all had previously received thousands of dollars in contributions from Drummond and Balch & Bingham. Spokespersons for the five did not reply to emailed questions this week asking whether those contributions played a part in their respective decisions to take up Drummond's cause.

The lawmaker who didn't sign the letter was Rep. Terri Sewell (D), the delegation's sole black member. A Sewell spokesman also did not respond to an email asking why she did not sign on.

#### Indicted EPA official

Glenn, a former ADEM director, was then a private consultant closely involved in the Drummond campaign.

Billing records show he was paid \$250 an hour as a consultant. His firm, Southeast Engineering & Consulting LLC, reaped more than a half-million dollars from its work for the company in 2014 and 2015, according to the records, made public as trial exhibits.

Glenn, who was not federally charged, said on the witness stand that he had been unaware of any potential illegality. Earlier this month, however, he and a partner in the consulting firm were indicted for allegedly violating the state ethics law, according to a two-paragraph news release from the Alabama Ethics Commission.

Environmental advocates believe the state charges stem from the fact that Glenn's partner served on the board that oversees ADEM at the same time that Southeast Engineering & Consulting was working for Drummond. Glenn, while strongly asserting his innocence, quit his EPA post over the weekend.

"I intend to focus on my family, fight these unfounded allegations and ultimately clear my name," he said in his resignation letter, posted online by AL.com, a news website.

'It would just rain soot'

Collegeville, reportedly named for a school that was not an institution of higher learning, is one of three mostly black communities covered by the Superfund designation, encompassing about 2,000 properties in all. The area is embedded in what was once a sprawling heavy-industry hub that was home to manufacturers of pig iron, pipe and coke. The last is a coal derivative used by steelmakers and foundries.

The black workers who supplied the bulk of the labor mostly lacked cars so they had to live nearby, said Vivian Starks, born in the area in 1940 and now the president of the Collegeville Neighborhood Association. Further hemming them in was the rigidly enforced code of racial segregation in place at the time.

Asked whether that legacy continues to reverberate in the pollution controversy, Starks said, "Of course it does."

"If we can put a man on the moon," she asked, "why the devil can't we do something about these emissions?"

Of the people living in Collegeville's ZIP code, about 90 percent are black and almost half live below the poverty line, according to U.S. Census estimates. Although Starks' relatively new home is handsome and immaculately furnished, the neighborhood is studded with vacant lots and sagging houses. Children are scarce, she said.

As elsewhere in Birmingham, air quality was abysmal before the passage of pollution control laws. "Man, in the evening time, it would just rain soot and stuff down on your car," said Charlie Powell, a former resident who now heads People Against Neighborhood Industrial Contamination (PANIC), an advocacy group that's seeking government help to buy out any homeowner who wants to leave. "You'd have to wash it every day."

Under EPA's hazard ranking system, an area must score at least 28.5 to qualify for inclusion on the National Priorities List. The Birmingham site merited a 50, the agency said in making the 2014 proposal.

Since then, cleanup has been underway, with recent work demarcated by the orange mesh fencing that rings some yards. For yards with soil contamination levels above a certain threshold, an EPA contractor will typically go up to a foot deep and replace the tainted dirt with fresh soil. Of the almost 700 properties so far found to warrant that treatment, about 400 have been cleaned up, according to an agency website.

While Parrish and other residents were generally satisfied with the caliber of the cleanup, they question how much long-term good it will do if the soot-forming emissions that they attribute to ABC Coke and other plants are not addressed. Their view is shared by Lois Gibbs, a longtime activist and founder of what is now known as the Center for Health, Environment & Justice. Without curbing pollution from other sources, "the area will just become re-contaminated," Gibbs, who has been working with Powell, said in an interview.

James Pinkney, a spokesman for EPA's Southeast regional office, didn't dismiss those concerns. However, the majority of contamination found so far comes from "fill dirt" brought in by neighboring industries, Pinkney said in an interview.

EPA press aides in Washington, D.C., didn't reply yesterday to emailed inquiries about the current status of the NPL proposal or the 2015 civil rights complaint.

The anger unleashed by the Drummond scandal was on sometimes raucous display Thursday at a public hearing on the Jefferson County Department of Health's bid to renew the ABC Coke plant's air permit with no changes.

Some 70 people packed a drab conference room in downtown Birmingham. Of the approximately 20 who spoke, all opposed reauthorizing the permit in its current form. The voices of some quavered as they recalled family members and others who fell ill or died from causes that they blamed on pollution.

"It is clear that there are parts of this city that are disproportionately affected by emissions from industry plants," said the Rev. Jennifer Sanders, a white minister. "If this is acceptable, why is there no ABC Coke in Mountain Brook?" Sanders asked, referring to a virtually all-white Birmingham suburb that ranks among Alabama's wealthiest areas.

Drummond and other companies "think we're worthless," said Tammie Smith, a bus driver. The coal firm's efforts to avoid cleanup costs were "despicable," said Brita Brudvig, a life insurance company actuary.

"I sincerely hope that you prove that this body is not another thing that has been bought out by Drummond and Balch," Brudvig told the two health department officials presiding over the hearing.

Parrish, down with the flu, didn't attend the hearing.

Later, she questioned what more anyone could do. "It's almost like a Band-Aid's been put on everything," she said, "and it's still bleeding."

# # #

***Karen Story***  
*Branch Secretary*  
*USEPA – Region 2*  
*Public Affairs Division*  
*Public Outreach Branch*  
*212-637-3128*

